

# **Strategy Guideline: Demonstration** Home

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### **Strategy Guideline: Demonstration Home**

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# Contents

Contentsv				
List of Figures				
List of Tables				
De	rinitions	. VII		
ΓO	rewaru knowledgements	viii iv		
Pro	aression Summary	IA X		
1	Introduction	1		
	Why Create Demonstration Homes?	1		
	How Demonstration Homes Generate Revenue	2		
	Beyond Financial Motivations			
2	Stakeholders	5		
-	Producer	5		
	How the Producer Makes Money from Demonstration House Projects	8		
	Lessons Learned from Successful Demonstration House Producers	e		
	Snonsors	0		
	Manufacturers as Demonstration Home Sponsors	0		
	Renefits to Manufacturers for Participating in Demonstration Home Projects	9		
	Challenges to Manufacturers for Participating in Demonstration House Projects	10		
	Lessons Learned from Manufacturers who are Successful Demonstration House Sponsors	11		
	Media Companies as Demonstration House Sponsors	.11		
	Panafita to Madia Companies as Spansors of Demonstration House Projects	.11		
	Challenges to Media Companies as Sponsors of Demonstration House Projects	.12		
	Channelles to Media Companies as Sponsors of Demonstration House Projects	.14		
	Lessons Learned by Successful Media Companies that Sponsor Demonstration Houses	.13		
	Covernment Agencies as Demonstration House Sponsors	.13		
	Benefits of DOE as a Sponsor of Demonstration House Project.	.10		
	Lessons Learned by the DOE from Participation in Demonstration House Projects	.18		
	Builders	.19		
	Benefits of Builders Associated with Demonstration House Projects	.19		
	Challenges of Builders Associated with Demonstration House Projects	20		
_	Lessons Learned from Successful Builders Associated with Demonstration House Projects	.20		
3	Communicating the Energy Efficiency Message in Demonstration House Projects	. 22		
	How to Communicate to the Building Industry	.22		
	Communication Strategies for Demonstration House Projects			
	Pre-Event Communication Tools			
	Showtime Communication Tools			
	Post-Event Communication Tools			
	Communication Lessons Learned from Completing Successful Projects	27		
References				
Ар	pendix A. Case Study: Cool Energy House	. 29		
	Media Partners Participation in CEH	.32		
	Showtime Events, Tours, and Sponsor Receptions	.35		
-	CEH Onsite Communication Tools and Lessons Learned	.36		
Ар	pendix B. Profiles of Successful Energy Efficient Demonstration Home Projects	. 40		



## **List of Figures**

Figure 1. Fair Oaks SMUD home	1
Figure 2. Bimini House	2
Figure 3 Habitat Metro Denver house	3
Figure 4. The 2009 New American Home	5
Figure 5. Cool Energy House	10
Figure 6. Artist's rendering of Cool Energy House as it appeared in Qualified Remodeler magazin	ne
(Source: Gary Hancock, reprinted with permission)	13
Figure 7. Ecofutures Building Inc.'s demonstration home	.14
Figure 8. ReVISION Home Las Vegas	16
Figure 9. Study: Type of Business	23
Figure 10. Study: Value of Information types	24
Figure 11. Cool Energy House - before	29
Figure 12. BEopt-generated chart of electrical loads	30
Figure 13. CEH window	30
Figure 14. Blowing in new insulation	30
Figure 15. GE Neucleus Home Manager (Source: GE Home Energy Management, reprinted with	
permission	31
Figure 16. Pool equipment change out	31
Figure 17. The Cool Energy House - after	32
Figure 18. Media station inside the CEH	33
Figure 19. CEH micro-site videos	34
Figure 20. CEH press event held February 9, 2012	35
Figure 21. Chevrolet Volt with power chord in CEH driveway	36
Figure 22. Hand-cranked information stations provided an audio description of the energy	
upgrades to the home and required no additional power	36
Figure 23: Window Replacement station and wall graphics	37
Figure 24. Information sheets available to CEH visitors	38
Figure 25. Solar panel display and explainer at the CEH	38
Figure 26. Bimini House	40
Figure 27. 2010 ReVISION House	40
Figure 28. Home by Design (Home by Design Showhouse)	41
Figure 29. Better Home Better Planet (Source: BASF Corporation; reprinted with permission)	41

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## **List of Tables**

 Table 1. Sample Producer Checklist

 7

Unless otherwise noted, all tables were created by the BARA team.

## Definitions

BA	Building America, a residential buildings program under the DOE
BARA	Building America Retrofit Alliance, a Building America team
Builder	The general contractor, primary builder or remodeler on a demonstration home project.
CARB	Consortium for Advanced Residential Buildings
DOE	U.S. Department of Energy
IBS	International Builders' Show
LEED	Leadership in Energy and Environmental Design
NGBS	National Green Building Standards
NAHB	National Association of Home Builders
Producer Sponsor	General manager of the demonstration home project and responsible for all aspects of the project. Contributing partner to the demonstration home project. May be product manufacturer, media partner, or public program like the DOE.

## Foreword

Demonstration house projects that coincide with large industry events, like the International Builders' Show (IBS), can be rewarding for builders, sponsors, media companies, and the producers involved with the project. These projects offer the building community as well as the public a chance to preview new designs, products, and building materials in a real world setting. The projects also offer the opportunity to gather content for use in promotional materials and data on tour attendees or viewers of multimedia materials generated from the project.

"Half the money I spend on advertising is wasted; the trouble is I don't know which half."

John Wanamaker (1838 - 1922), (attributed)

However, demonstration house projects are also risky business in terms of cost and impact. Multiple competing interests in these projects can often dilute targeted messages, such as those focused on improving energy performance. The sheer volume of demonstration projects produced in association with major events each year is daunting and it is difficult to determine which projects have the most potential impact and which can be best used to further the objectives of non-traditional participants, such as the U.S. Department of Energy's (DOE) Building America (BA) program.

Demonstration homes have been part of outreach programs and manufacturing sales strategies since such strategies existed. As part of the work to produce this strategy guideline, the Building America Retrofit Alliance (BARA) looked at some of the more recent demonstration projects to try to quantify their performance. This project sought to help inform BA's outreach efforts to support demonstration projects. Fundamentally, the past problem is that while the DOE/BA has regularly spent money on demonstration homes, there wasn't clarity on the communication and partnership strategies and tools used to convey the desired message to stakeholders. Therefore, questions arose about the best use of taxpayer money on demonstration home projects when pursing and promoting BA energy efficiency goals. By drawing on the vast experience and data on communication tools in demonstration homes in the past, this report intends to provide useful information as the DOE/BA develops and implements comprehensive communications and outreach strategies.

The authors also hope that this document is useful to a wide audience: builders, remodelers, home performance contractors, real estate agents, product manufacturers, marketing and communication organizations, homeowners, and others. The intent of the document is to provide building industry professionals with insight into what is required to successfully complete a demonstration house project and what to expect in return. Also, this document will focus on how successful demonstration projects effectively use communication tools and control the overall message related to the demonstration house. Sound messaging and partnership strategies are especially difficult if the project is narrowly focused on forwarding energy efficiency building techniques and technologies, as these messages can easily get diluted in the wash of manufacturer product messaging.

This document begins with a general discussion on what demonstration house projects are, how they generate revenue, and the motivations for stakeholders in the building community to participate in the projects. It continues with an in-depth look at each of the major roles stakeholders play in the demonstration house project: the producer, builder, and sponsor. Also included is a discussion of "theme" sponsors, including the DOE and BA technical teams that attempt to inform and educate the public about energy efficiency building practices through demonstration house projects. Finally, the document will explore some of the typical communication tools used before, during, and after large industry events to promote demonstration house projects.

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## **Progression Summary**

The process for creating a successful demonstration house project is not always consistent. However, there are several milestones that projects must reach in order to be successful.



## 1 Introduction

Demonstration houses or "show" homes are a familiar sight at trade events inviting builders, trade contractors, architects, media representatives, and manufacturers to see firsthand the latest building techniques and innovations. While from the outside these projects may seem as seamless and simple as the process of building a traditional new home, the truth is that behind the scenes many different players are involved in a complicated effort to "put on a show", in the context of finishing the project on time, within budget, and at a profit.

Traditionally, demonstration home projects have focused on only new home construction. This manifests itself as either traditionally built homes near the event center or modular homes that are factory built and then shipped and assembled at the show site. Today, however, another kind of demonstration home project is becoming more common: the retrofit demonstration home. Unlike new home construction, retrofit homes have the additional challenge of trying to include home owner budgets, scale of project, location, expected outcomes, and timeline into the project. Because of this, demonstration retrofit projects can be even more difficult to successfully complete.



Figure 1. Fair Oaks SMUD home

Barriers to a successful demonstration house can be

compounded when the project attempts to be more than just "a box full of products" simply showcasing the latest appliances and home furnishings. In the case of projects that pursue an energy efficiency or environmentally conscious goal, a successful outcome can be difficult and expensive, and may not provide the return on investment producers are looking for.

This guideline will provide a general overview of the different kinds of demonstration home projects, a basic understanding of the different roles and responsibilities involved in the successful completion of a demonstration home, and an introduction into some of the lessons learned from actual demonstration home projects. Also, this guideline will specifically look at the communication methods employed during demonstration home projects. And lastly, we will focus on how to best create a communication plan for including an energy efficient message in a demonstration home project and carry that message to successful completion.

#### Why Create Demonstration Homes?

Financial gain is the primary motivation producers have for creating demonstration home projects, both in new construction and retrofit homes. That gain can be in the form of revenue or less tangible gains such as marketing, sales, or visibility. Through a series of relationships and contractual commitments, all parties involved in a demonstration home project have the opportunity to gain financially if the demonstration home is able to successfully achieve the intended goals.

The primary goals include:

- Completing the project prior to the industry event, builder's show, or trade show.
- Successful marketing and communication of the demonstration home before, during, and after the event.
- Adequate number of attendees touring and visiting the home, on site and online, generating interest and potential sales leads for all parties involved.

In order to generate a large enough potential audience to justify the expense involved with creating a demonstration home project, most demonstration houses are built in conjunction with major industry events. The idea is to leverage attendees already at these industry events to tour the demonstration home or special events at the location. Once there, the visitors can be registered where they become qualified leads for all parties involved in the development of the project. Lead generation is one of the primary goals for a demonstration house project, and so successfully capturing as much information about attendees who take the tour is paramount, especially if providing them with a positive, professional, and educational experience is a measurement of the success of the project.

Although demonstration houses are often called "show" houses, there is a subtle but important distinction between the two. A demonstration house has a specific intent and theme that is followed through in every aspect of the project. A show home, on the other hand, usually displays the latest and most attractive new appliances, designs, and features available in modern construction. Although this may seem like a matter of simple semantics, the philosophical difference between a demonstration house and show house is significant. The difference will shape everything about the project from the basic approach to the type of partners involved in the project, and communication strategies. Both show homes and demonstration homes can be successful or disappointing if they fail to accomplish their respective goals.



Figure 2. Bimini House

#### How Demonstration Homes Generate Revenue

In most cases, the initial source of revenue for demonstration home projects comes directly from sponsors or manufacturers who want to have their specific building products displayed or promoted in the house. Participation in a demonstration home project is divided into several tiers so that sponsors can participate in the project as their budgets allow. A manufacturer of building products will contribute a combination of direct funds and product to a demonstration home project. For a media company that produces magazines, television shows, newsletters, or websites, typical contributions include funding and in-kind promotional elements like articles, features, and promotional videos. An example of how paid participation in a demonstration home project is established could be:

- Gold/Emerald Level Sponsorship: \$10,000 in cash or product/support equivalent
- Silver/Jade Level Sponsorship: \$5,000 in cash or product/support equivalent
- Bronze Level Sponsorship: \$2,500 in cash or product/support equivalent

Occasionally, demonstration homes will have one sponsor that invests a greater amount than all other sponsors. This primary sponsor, also called the core, title, or anchor sponsor, is usually part of the demonstration house team from the very beginning and helps fund the project while other sponsors are being sought and brought into the project.

For participating in the demonstration house, sponsors and other financial contributors are offered brand exposure, quality control, and, in some cases, message control of the project. Anchor sponsors, because of their larger investment, typically drive the overarching messages, such as design trends, building systems, or energy efficiency packages. When the demonstration house is open to the public, the sponsors may also be granted special access to the home for exclusive events, meetings, and press conferences. This is especially true for the anchor sponsor. In all cases, the more a contributor provides to a project, the more control they have over the messaging and positioning of their brand in the demonstration house.

In addition to funds garnered from sponsors, other revenue streams or financial contribution may be identified and used, This may include funding from public entities, including the DOE, Housing and Urban Development, local governments or utility programs, as well as trade associations such as Metal Roofing Alliance, Propane Association, or the National Association of Home Builders.

#### **Beyond Financial Motivations**

Not all demonstration home projects are exclusively financially driven. Some have the goal of providing outreach for specific programs or to promote particular design and construction strategies. Examples of projects have included builds for Habitat for Humanity and projects designed to promote affordable housing. Improving the healthfulness and comfort of a home, showcasing energy efficiency and renewable energy, universal design, and promoting aging-in-place options have also been themes or sub-themes of more altruistic demonstration home projects.



Figure 3 Habitat Metro Denver house

Recently, though, one of the most common themes of demonstration homes has been the conservation of natural resources to either protect the environment or to reduce energy costs for the homeowner. Energy efficient appliances, designs, and building technologies are now a mainstay of most demonstration home projects. Recent demonstration home projects that focused on energy efficiency have ranged from simply creating a smaller footprint for the home to houses complete with onsite power generation capabilities and the potential for net metering.

Choosing to launch a demonstration home project that specifically addresses improved energy efficiency, building science, construction technologies, and environmentally responsible materials brings an additional level of complexity to a demonstration house project. This can be even more challenging when trying to communicate the overall theme or message of the home before, during, and after the industry event. Creating effective communication tools around an energy efficiency themed project requires the traditional efforts to draw people through the home. Further, it must cultivate an interest in stakeholders to agree with the overall energy efficiency or "green" message of the project. Unlike a traditional show home that can simply display the latest and greatest improvements to home furnishings, an energy efficiency themed demonstration home must engage that specific group of show attendees or potential buyers who can both appreciate the energy efficiency message and are in a position to actively encourage their clients and customers to select energy-saving building technologies.

Demonstration home projects that promote energy efficiency also should be evaluated and tested by certified technical teams to validate the energy-saving goals marketed by the project, especially if the project hopes to obtain specific green building credentials like DOE Challenge Home and ENERGY STAR<sup>®</sup> or green building certifications like LEED-H and National Green Building Certification. For new homes, this often involves including the technical team before the project begins to make sure the design, systems engineering, and architecture of the building will meet the required energy saving standards. As with a traditional construction project, achieving a green building certification can be a challenge. However, this task is even more complicated when the project must incorporate potentially disparate products, a compressed building schedule, new building methods or technologies, and multiple vested interests, all while on a strict budget.

## 2 Stakeholders

The successful completion of a demonstration home involves a large cast of characters working together to accomplish the overall goals. Demonstration homes require vision, cooperation, leadership, and dedication as well as business savvy and strong marketing skills in order to succeed. The primary roles involved in a demonstration home project are:

- Producer
- Sponsor
- Builder.

In the case of retrofit projects or demonstration houses with an energy efficient theme, two other primary roles are usually involved:

- Homeowner
- Technical partners.

Each of these participants plays a critical role in the success of the demonstration house and has specific needs and responsibilities to ensure that the project succeeds. Conflict between these roles is common and resolving this conflict quickly and amicably can mean the difference between a successful project and a disastrous one.

#### Producer

The demonstration house producer is the key mastermind to the entire project and has the greatest opportunity to directly gain financially from the endeavor. Like a movie producer, the show home producer typically identifies and defines the thematic and financial opportunity for a project. The producer selects the location, employs a sales team, administrators, and support staff, actively recruits the builder, sponsors, and technical partners and interfaces directly with



Figure 4. The 2009 New American Home

the homeowner in retrofit situations. The ultimate success of the demonstration home project will hinge on the producer's ability to coordinate all the vested participants in the project and ensure that they work together smoothly and within the constraints of a limited budget and specific timeline.

The producer also must be able to identify communication tools and other opportunities necessary to promote the demonstration home. This can require cultivating relationships with media partners and industry show promoters and often seeking the support of public sector resources including the DOE, utilities, municipal governments, and local charities. While the producer doesn't have to actually perform all the tasks associated with the successful completion of a demonstration house project, they are responsible for coordinating and managing them. These include:

*Location selection* - The producer must be able to locate and secure a building site or retrofit opportunity within close proximity to the trade event that will allow for the most exposure of the project to the industry event attendees. Deciding to host a demonstration project onsite at the industry event or offsite will be "I play the role of the conductor keeping everyone on the same page."

Tucker Bernard, The New American Home Project Executor

one of the first decisions the producer must make. The advantage of choosing an onsite location is that historical data and event registration numbers should provide a relatively accurate idea of how many attendees can be drawn to the demonstration project during the industry event. On the down side, onsite construction will limit the type of construction possible and the amount of time the demonstration home will be available for viewing by the public and media. Offsite may be more attractive because it will offer a longer construction schedule, but will require a more challenging level of logistics to transport attendees to and from the industry event. Above all, the location must fall into the practical price range of the project, be media accessible, be logistically feasible for buses or parking during the tour, and, in the case of a retrofit project, have a supportive homeowner willing to participate in the project.

*Sponsorship sales* - For direct selling, the producer will generally hire or subcontract the cultivation of sponsors to a subordinate. However, securing and maintaining the relationship of the anchor or title sponsor is often solely the producer's responsibility. A common mistake in a demonstration house project is to allow the construction schedule to be based on the ability to acquire sponsors. This can result in stalling the construction timeline and may reduce the quality of materials for the project if a sponsor cannot be found. The key is to have a solid business plan and budget in place before construction begins. The producer must feel confident that the project can be completed prior to the industry event and that all critical goals are achieved regardless of sponsorship participation.

#### Table 1. Sample Producer Checklist

<b>Producer Checklist - Demonstration House Project</b>
Hire production assistants
Update project management checklist
Write audio walk-through script
Produce walk-through recording
Secure MP3 player rentals
Secure card swipe hardware
Hire talent for events
Collect sponsor material and burn CDs
Review and approve production video costs, website design costs
Hire photographer for professional photos
Collect and organize marketing collateral
Produce flash virtual online tour
Hire additional onsite staffing help
Coordinate staff travel for pre-production,
production, post-production
Coordinate meals & entertainment
Coordinate printing of outdoor banner/signage
Review magazine insertion costs
Collect and review exhibitor and sponsor signage
Hire and coordinate with professional PR & marketing
Analyze sales costs
Plan VIP/Press Event
Plan pre-show, mid-show, and post show cleaning
Rent and coordinate porta potties
Review tour schedule and confirm bus schedule
Purchase builder appreciation gift
Security

*Theme management* - Selecting the theme for the demonstration house project and making sure all components of the project support that theme is the responsibility of the producer. Ultimately, the project will be judged on whether or not it successfully accomplished the mission stated in the theme. For a show home that touts the latest luxury innovation, as in the case of the New American Home sponsored by the NAHB, the public or media will ultimately decide if the project has succeeded in showcasing the elements promised. In the case of a demonstration house project that is pressing an energy efficiency message, securing a technical team validation through building diagnostics, achieving specific HERS ratings, or earning green building certifications will determine the success of the project.

#### How the Producer Makes Money from Demonstration House Projects

The demonstration house producer ultimately makes money if the amount of revenue generated from sponsor participation is greater than the cost of building and managing the project. At times, the margin on a project can be very thin and every dollar the producer spends on sponsors' events, promotion, communication tools, and extras for the house takes away from the net profit. Despite the temptation to cut corners for profit, most experienced producers understand that the integrity of the project hinges on delivering a quality product. Where producers often err is in minimizing the importance of communication tools to entice tour participants and attract media attention. Even though the initial bottom line of the project may be evaluated on the number of sponsors and minimizing cost overruns, future projects will depend on how many leads are generated and visibility created for sponsors and the builder.

#### Lessons Learned from Successful Demonstration House Producers

When interviewed, successful demonstration home producers agreed on several common lessons that they have learned over the course of completing multiple demonstration home projects. These include:

- Chemistry: Make sure your design/build team or owner/stakeholders in the actual building have good chemistry with each other and with the producer.
- Visibility: The key to attracting quality sponsors, builders, and media is to create a demonstration plan that will differentiate your project from other projects and industry events.
- Theme: Pick a theme that is timely, manageable, and marketable. The theme of the demonstration house project will have significant ramifications on the project and impact everything from sponsors to media and tour interest.

"Every time a show house is completed on time, it's a small miracle."

Craig Savage, ReVision House Las Vegas 2010 Producer

- Pre-sell sponsors: To reduce financial liability and ensure the project can be completed to the expected quality, lock in sponsors before the project begins.
- Pre-sell the house: In the case of new construction, having a qualified buyer in contractual agreement to purchase the home before construction begins will ensure you can step out of the project when the related marketing activities and industry events are completed.

#### Sponsors

There are three primary types of sponsors of demonstration home projects: manufacturers and their associations, media companies, and public agencies like the DOE. There are specific risks and benefits to each type of demonstration house sponsor, but one lesson is consistent with each: the more they contribute to the project, the greater influence they will have over the marketing, communication tools, theme, and overall success of the project.

#### Manufacturers as Demonstration Home Sponsors

Manufacturers who choose to participate in demonstration or show homes are generally motivated by the same incentives as the producer but usually have to wait to actualize the gains until after the industry event is long over. From a direct sales perspective, only after the public and press has had a chance to see firsthand the new products, appliances, and building materials used in the demonstration home can the sponsor expect to realize tangible results from their involvement. However, there are many other benefits to participating in a demonstration house for the manufacturer, and these benefits generally increase with the amount of product, money, or support they are willing to provide to the project.

Although manufacturers can be heavily involved in demonstration house projects, they are rarely the title sponsor, choosing instead to supply support and building materials and product at a lower tier.

#### Benefits to Manufacturers for Participating in Demonstration Home Projects

Some of the main reasons manufacturers decide to participate in demonstration home projects include:

*Brand awareness* - Manufacturers are drawn to demonstration houses because affiliation with successful projects increases brand awareness to new

"Generally, in spite of the pain and suffering getting things together, demonstration homes are worthwhile."

Tom Miller, Miller Brooks Inc., a firm that represents many manufacturers, including Typar and BASF.

or unique products that are being introduced to the public and could benefit from additional exposure. Often the successful demonstration house project can provide a venue to show working products, new product introductions, or a demonstration of products to the media and potential national clients. From the manufacturer's standpoint, increasing brand awareness and focusing specifically on a new product line are best done by analyzing the potential media exposure, scale of the project, target audience, and overall support the demonstration house project will receive from other sponsors.

*Positive association* - Depending on the project, sponsors who are manufacturers can benefit from being associated with the title sponsor if the overall theme of the demonstration house is one that promotes the ideals of the sponsors' products. For instance, partnering with the NAHB to showcase products in The New American Home can be advantageous for a manufacturer promoting the latest high tech product or a product that is more upscale and akin to a luxury item. Often, manufacturers that are trying to associate with green or energy efficiency, like insulation and window manufacturers, will be inclined to participate in projects alongside the DOE and homes that are attempting to achieve a green building certification like DOE Challenge Home, ENERGY STAR, or LEED for Homes. From a marketing standpoint, even though these certifications do not expressly endorse a specific product, the close association can be seen as a seal of approval in the consumer's eyes.

*Community and access opportunities* - Participating in a demonstration house project can offer the manufacturer sponsor a chance to have a meeting place, event space, and press conference location during the industry event. Meeting potential clients off the floor of the trade event and in

a more comfortable, casual, calm, and quiet environment can help increase the networking opportunity for the manufacturer and also help them showcase their products or innovations in a real world setting. For manufacturers who contribute more to a specific project, they have the opportunity to secure the demonstration house for invitation-only events, which can help enhance their position in the industry. Likewise, by collaborating with other sponsors, the manufacturer can create a sense of community around the project, which can also support general brand awareness.

Challenges to Manufacturers for Participating in Demonstration House Projects

Although there are clear benefits for manufacturers and their associations who choose to participate in demonstration house projects, there are also significant challenges to participation. These challenges include:

*Coordinating product* - Because demonstration house projects are usually on tight schedules with an absolute completion date, coordinating delivery and installation of building materials and products to the job site can prove to be a challenge for the manufacturer. During the course of building the demonstration house or retrofitting an existing house, the building schedule can be relatively fluid as sponsors sign on or drop out of the project. Demonstration house projects occasionally have to change their expectations about furnishings, design, and even energy efficiency standards to complete the project before the industry event. This can mean changes to



Figure 5. Cool Energy House

appliances, design standards, and building products, which sponsors need to respond to quickly as part of their participation. Sometimes simply getting the product to the jobsite can be a challenge as many demonstration house projects are managed remotely and require coordination with the producer, builder, and sometimes other sponsors. Related to the product delivery, theft can also be a significant problem for sponsors. Demonstration house projects draw attention to the work being done on the jobsite. Because demonstration houses may not follow traditional building schedules or may experience delays, delivered building product may sit uninstalled on the job site longer than on traditional build schedules, which increases the risk of pilfering, damage, or the material simply getting lost.

*Finding the right fit* - Sponsors who are primarily manufacturers should understand the fine line between a demonstration home, where all components of the project need to be aligned behind a single theme, and a show home, which is often described as a "box of products." Finding the right fit between the products offered by the manufacturer and the needs of the demonstration house project can be a point of conflict between the sponsor and producer. This is often the case in projects that are vying for energy efficiency or green building certifications because the producer has to ensure that appliances and building materials will meet or exceed energy conservation expectations before accepting them from the sponsor.

*Missed expectations* - Because demonstration house projects aren't actual storefronts for building products, it can be a challenge for manufacturers to realize the return on their investment in the project. Lead generation and general brand awareness are often difficult to quantify unless the

producer has established a strong communication feedback loop that tracks tour participants and media exposure, not to mention actual product sales, which may happen months later. Because of this, manufacturers can be disappointed after participation in a demonstration house project if they don't have data related to their specific contribution. Also, as the national economy lingers in a downturn, general attendance at building industry events has waned, sometimes by as much as 50%. This means that overall there are fewer potential customers attending events and taking tours of demonstration house projects. As attendance drops to a fraction of what it was only a few years ago, many of the benefits associated with sponsoring a demonstration house are proportionally diminished. The key to overcoming this challenge is for the manufacturer to negotiate with the producer before agreeing to sponsor a project and make sure that their and the producer's marketing and communication elements are in place to draw attention to the project, as well as a successful means of collecting and reporting data about attendance, attention, and potential leads.

"The biggest challenges come from short turn around on product delivery once the final product selections are made. Also, issues with lost product on the job site and changing orders as selection seems to continue to change up until the opening of the home. This usually means we are spending more for product and shipping than originally forecast."

Debbie Drury, Director of Brand Communications American Standard Brands (ASB)

# Lessons Learned from Manufacturers who are Successful Demonstration House Sponsors

When interviewed, manufacturers who are successful demonstration home sponsors agreed on several common lessons that they have learned over the course of completing multiple demonstration home projects. These lessons include:

- Identify potential point of conflict and proactively seek resolution.
- Have a clearly defined product list and sufficient time to get product ordered and shipped.
- Ship all products in one shipment to avoid lost items on job site.
- Clarify reasonable expectations for media coverage, tour attendance, and realistic lead generation before agreeing to sponsor a demonstration house project.

#### Media Companies as Demonstration House Sponsors

Media and publishing companies often contribute to demonstration house products at a higher tier than manufacturers, sometimes even taking on the role as title sponsor. Historically, media companies have also produced some of the largest demonstration home projects at industry events. This is because the benefits for media and publishing companies can be more immediate and significant than a manufacturer who is trying to highlight a single product or brand name.

For media companies, demonstration homes offer unique opportunities because involvement

with the project can be mutually beneficial to both the producer's goals and the sponsor's goals. For example, if, as part of their contribution to the project, the media company commits to creating a series of articles on the project, the producer benefits by the exposure and the media company can create an editorial calendar that supplies interesting content to their audience base.

Often, the media sponsor will have multiple print magazines, websites, and, in some cases, television programming that can all be utilized to promote the project. The larger and more organized the media company, the greater the cross pollination and market saturation for the project. Frequently, media and publishing companies offer several channels to communicate the demonstration house project to their target audience, but these resources are generally focused around three primary touch points:

- Online through websites, micro-websites, email blasts, e-newsletters, and advertisements
- In print through magazines, fliers, circulars, and bulk mailings

"To be honest, we had a booth inside (building industry events) for many years and brought manufacturers to have lunch and the booth doesn't have the return. We were looking for something to make us different."

Judy Brociek, Director of Events, Professional Builder Magazine, on why media and publishing companies choose to participate in demonstration house projects.

• In person at the demonstration house during special events and tours.

Because the media or publishing company has so much control over communicating and promoting the demonstration project, media companies can be very influential sponsors and ultimately make or break a demonstration project.

#### Benefits to Media Companies as Sponsors of Demonstration House Projects

Media and publishing companies that focus on residential construction, home improvement, and trade associations can benefit from participating in demonstration house projects in three significant ways. First, the project offers them a chance to have access to their customer base in a unique and real world setting. Second, publishing companies need fresh and interesting content that can be readily generated through documenting a demonstration house project. Finally, association with a project can allow the publishing company to create additional financial opportunities through partnerships with manufacturers also involved in the project.

*Access* - Similar to why manufacturers participate in demonstration house projects, media companies can find a unique vantage point by being associated with these sorts of construction projects. Authenticity is a very important aspect of marketing. If a media or publishing company wants to increase brand awareness and strengthen brand integrity, demonstration house projects can offer them a unique opportunity to work side-by-side with actual builders and trade professionals. Also, builders and manufacturers associated with the project will often be very enthusiastic to pursue relationships with the media company to help promote their brand or

products. Because the media company controls the amount of coverage and exposure a project receives, demonstration house projects offer a chance for networking and building advertising sales leads for the media company.



Figure 6. Artist's rendering of Cool Energy House as it appeared in Qualified Remodeler magazine (Source: Gary Hancock, reprinted with permission)

*Fresh content* - Publishers understand that demonstration projects are often on the cutting edge of residential construction technology. This is especially true with projects that are promoting new building science techniques, innovative designs, or incorporating the latest building products. Being able to showcase new products to readers gives the media company fresh and interesting content as well as the opportunity to be seen as an information clearing house to consumers. The content

is then leveraged and multipurposed across the entire media company's communication assets on a specific schedule to inform, educate, and entice their audience to engage with the project and visit the demonstration house. A typical schedule for a media company's involvement in the demonstration house project may look like this:

- Promote the project pre-, during, and post-show through a full, online, multimedia content package. The media company will cover the home and its transformation as a retrofit project or during the construction of a new home from both a style and performance perspective. This is accomplished via:
  - Multiple feature articles on the media company's signature or primary website with marketing and promotion on the homepage.
  - Cross promotion on other websites within the media company's holdings.
  - Significant coverage of the project in newsletters prior to the industry event to build awareness and excitement.
  - Promotion of this feature to their professional audience in a new monthly professional newsletter.
  - Repurposing and exposure of existing BA case studies and materials to support the content package.
- Participate in the promotion of the project at press events, potentially assisting in securing a high-profile speaker or television personality to appear alongside the builder, producer, and other sponsors.
- Host various hospitality and exclusive media events in and around the demonstration house during the industry event.

*Financial opportunities* - A media company that signs on to support a demonstration house may have more opportunity to gain financially than any other single player involved in the project. This is because association with the demonstration house can fulfill existing contracts with vendors and lead to additional contracts with new clients. Media companies in the building industry usually sell packages of proposed content and exposure to their clients, often

manufacturers, committing to showcase products and brands across several media channels throughout the year. For example, a media company may sell a \$1 million advertising and promotional package to a manufacturer that includes:

- Full page ads in several magazines
- A series of online text and/or video building material reviews highlighting the manufacturers specific product
- Online ads placed near relevant news stories or articles
- Television commercials and specific product mention during relevant installation segments
- Online training courses, often with continuing education units

As part of this promotional package, the media company may agree to give the manufacturer's product prominent placement if the manufacturer agrees to participate in the demonstration house project. Again, because the media company controls the amount of coverage and exposure and specific editorial or advertorial content associated with the demonstration house project, they are in a unique position to be able to maximize financial gain from the relationship.

It is also interesting to note that by being a sponsor, the media company can enjoy exclusive coverage of the demonstration home project. If the project is wildly successful, this can equate to an even greater return on their investment in the project.

#### Challenges to Media Companies as Sponsors of Demonstration House Projects

Although there are significant benefits for media companies to sign on as a sponsor of a demonstration house, there are also some risks and challenges associated with undertaking the project.

*Client management* - With so many potential contractual obligations associated with the financial opportunities around a demonstration house project, media companies have to carefully manage their clients' expectations. This can become especially difficult during the event and tour stage of the project when manufacturer clients may wish to secure special events or have press conferences to promote their specific product. Also, media companies have to be careful to maintain their integrity. While advertising and basic promotion are expected, media companies should always pay attention to conflict of interest concerns. They should strive to provide their audience with more than promotional material for paying their advertisers and seek to inform and educate.



Figure 7. Ecofutures Building Inc.'s demonstration home

*Timing* - Some of the more elaborate demonstration or show home projects can take more than 18 months to complete. This is true of such projects as The New American Home, which chooses communities that are exclusive and often have elaborate designs and specifications. For a media company sponsoring a project with such a long build schedule, it can be a challenge to coordinate promotional support that maintains interest in the project for such a long period of time. One of the common approaches with elaborate demonstration projects is to have a media or content blackout on the project until shortly before the industry event. This can pose a problem for media companies if they have agreed to promote other clients associated with the house who are anxious to gain exposure. Also related to the challenge of timing, media companies must compete for audience share. Large industry events, like IBS, often have multiple demonstration house projects with several media companies all vying for attention.

"I think our best selling point is the demo home that people can walk through and see. You can sit at that booth all you want, but when they actually walk through that home and see it - see someone standing next to the HVAC system giving you the facts on why it saves you money, you can't replace that with pieces of paper."

Pat Love, RND Program Manager for Building America, Oak Ridge National Lab

# Lessons Learned by Successful Media Companies that Sponsor Demonstration Houses

When interviewed, media companies who are successful demonstration home sponsors agreed on several common lessons that they have learned over the course of completing multiple demonstration home projects. These lessons include:

- Stick with core competencies. Some media companies are large enough to produce and manage demonstration house projects, but most are more successful if they stick with what they know and focus on being publishers, not producers.
- Offer clients exclusive times and access points during industry events to reduce potential conflict between competing manufacturers.
- Use the demonstration house project primarily as an opportunity to connect with manufacturers and builders by creating round table sessions and networking events.

#### **Government Agencies as Demonstration House Sponsors**

In the past, one of the most prominent sponsors of demonstration homes that focus on improving energy efficiency is the DOE through its BA program. BA is a research program with the stated goal to accelerate the development and adoption of new building energy technologies and practices in new and existing homes.

To this end, BA supports, through funding, technical teams that are assigned to develop and study construction practices that achieve significant energy and cost savings for homeowners. As part of their participation requirements, the BA teams, or technical teams, often partner with

homebuilders and retrofit companies and participate in demonstration house projects that have an energy efficient theme or goal.

The technical teams support the builders in demonstration house project in many ways. These include:

- Assist with design features within the home that impact the building envelope and the integration of structural, thermal, and moisture control strategies.
- Help design and define the specifications for heating, cooling, domestic hot water, lighting, and renewable energy systems that enhance the comfort, health, durability, and energy efficiency of the house.
- Actively participate in the management of the construction process to ensure new or untested energy efficient building techniques are being installed correctly.
- Train and support the builder and trades as needed to meet energy efficiency goals.
- Work with other sponsors to ensure building materials, appliances, and applicable building products all meet or exceed the standards required to achieve the stated energy efficiency goal of the project.
- Test the home and validate that energy efficiency goals have been achieved.
- Maintain quality control over the messages coming from the project.

There are many demonstration or "test" house projects active across the United States that technical teams participate in, and the vast majority do not receive any direct cash support from the DOE. However, when demonstration projects are held in conjunction with large industry events, the DOE has sometimes agreed to contribute additional funds to the project as a sponsor. These funds help support the project with the focus of implementing new building technologies aimed at improving the energy efficiency of the house. Often, because of the level of funding, DOE is the top tier or title sponsor.



Figure 8. ReVISION Home Las Vegas

#### Benefits of DOE as a Sponsor of Demonstration House Project

There are several benefits, all non-financial, for the DOE when they contribute to a demonstration house project as a title or top tier sponsor.

*Validation of research* - BA acts as a national residential test bed where different building system options are evaluated, designed, built, retrofitted, and vetted to ensure that requirements for energy efficiency, quality, sustainability, risk mitigation, and comfort are met. Finding real world opportunities to actually employ and demonstrate this research is one of the benefits of participating in a demonstration house project. The demonstration house projects allow BA teams to interact with builders, trades, homeowners, and building product manufacturers to better identify the gaps and barriers between the research lab and the jobsite. Results and feedback from the demonstration house project are reported to BA and the DOE, which helps define and establish future goals for the BA program. This live feedback cycle of test, validate, and report enables BA to remain grounded in actual energy efficiency research that can both reduce energy consumption and be accepted by builders and homeowners. However, the role of demonstration homes is not the same as actual research or "test" homes, which are generally longer-term projects with controlled environments and very specific research goals. Demonstration homes can help identify how building technologies and products will operate in real world conditions and provide anecdotal information to the DOE, but these projects rarely are used as "research pilot home projects" conducted by BA teams as part of their typical research cycle.

*General outreach* - The DOE is in a unique position as a sponsor of a demonstration house project because, unlike manufacturer sponsors, there is no tangible product the DOE is trying to sell. The mission of the DOE is not financial return but rather to educate, inform, and promote better building technologies that will lead to the improvement of energy efficiency and to promote the overall BA program to key audiences. The intent is to get builders to agree to learn how to install or implement the energy efficiency measures in the house and then through marketing, communication, and events, to expose the general public to the availability of these measures. Demonstration houses provide the DOE with that opportunity because of the national media attention large demonstration house projects generate.

*Support of specific initiatives* - As part of its continuing mission to educate and encourage the public to seek energy efficiency solutions for their homes, the DOE creates programs like the DOE Challenge Home. Demonstration house projects offer the DOE an opportunity to launch these programs and recognize industry professionals participating in them. Events held in the demonstration house to spotlight the builders of a Challenge Home house can include ribbon cutting events, press conferences, and award ceremonies. Participation in the demonstration house enables the DOE to both promote these new initiatives, and also have a platform to further communicate their goals.

#### Challenges of DOE as a Sponsor of Demonstration House Project

The DOE faces interesting and unique challenges when they choose to sponsor a demonstration house project—challenges that other sponsors generally don't have to face.

*Public perception* - The current political climate has created an occasionally hostile environment for public programs and some may wonder if it is in the taxpayers' best interest for the DOE to contribute to demonstration house projects. Ribbon cutting events, press conferences, and cocktail parties—even those not directly sponsored by the DOE but held in the demonstration house—can all contribute to the feeling that demonstration homes are more superfluous than substantial in the pursuit of improving energy efficiency. To address these challenges, the BA teams and the DOE must carefully coordinate to ensure that the demonstration house remains true to the research goals and does not become a "show" house. Managing public perception can be difficult; however, by using demonstration house projects to show actual energy saving potential in real-world and accessible locations, the DOE is able to bridge the gap between research and deployment of building science technologies.

*Industry acceptance* - In an industry that is notoriously slow to change, trying to gain traction with implementing new building technologies can be a daunting task. The reason the DOE contributes funds to demonstration house projects is that often the energy efficiency improvements increase the overall cost of building or retrofitting the house. Without these funds, the builder would have to rely on the homebuyer/owner to finance the improvements. Demonstration houses enable the DOE to show the industry that the energy efficiency technologies are possible to implement and when successful, can convince builders to adopt these improved building techniques moving forward.

*Message control* - The Building America program is a voluntary program that strives to research and develop innovative energy efficiency strategies. This focus requires that the message and overall "story" of the demonstration house project be something that is practical, easy for the construction community to grasp, and that promotes the intended goals of increasing awareness of energy efficiency. While this may be the goal of the DOE, it is not always the goal of all other participants in the project. Therefore, as the title sponsor, the DOE must be willing to exercise their position as a top tier participant and demand that the core message of the demonstration house reflects the goals of the DOE.

"Most people think of remodeling as aesthetics, upgrading their comfort features. What we are trying to do is to tell them that if they are remodeling anyway, buy that energy efficiency refrigerator. But don't put the old one in the garage, get rid of it."

Pat Love, RND Program Manager for Building America, Oak Ridge National Lab

#### Lessons Learned by the DOE from Participation in Demonstration House Projects

Having successfully completed many research projects, representatives from the DOE have agreed on several common lessons learned from participation in multiple demonstration home projects. These lessons include:

- Know your audience. To create lasting impact in the industry, it is important to persuade more than just peers and committed builders that energy efficiency is important. All members of the building cycle must be addressed. These include: remodeler, sub-trades, architect, homebuyers, and even real estate agents and lenders.
- Expand to new markets. Because of the downturn in new construction starts, shifting to a greater percentage of energy upgrades or retrofits to existing homes is a natural progression. Whereas a few years ago 80% of demonstration homes were new construction and 20% were retrofits, current trends are shifting the retrofits closer to 60% and new construction to 40%.
- Explain the investment. When the home is completed and open to the DOE for VIP events or press conferences, it is important to show and tell how money was spent on the project and the expected return on the investment.
- Show the technology and share the technology. Recent projects have focused on communicating directly to the homebuyer to show them that the energy efficiency improving building techniques are available to them.

#### **Builders**

Homebuilders and remodelers that sign onto demonstration house projects need to have patience and a good deal of flexibility in order to successfully work with the producer and sponsors. However, for as difficult as multiple change orders, new technologies, a drop-dead closing date, and incorporating a vast array of building materials into a house may be, the builder can often find that demonstration house projects are a quality source of lead generation and industry recognition.

#### Benefits of Builders Associated with Demonstration House Projects

Some of the benefits a builder can enjoy by participating in demonstration house projects include the opportunity to try new building technologies, association with green building programs, and lead generation.

*Exposure to new building materials and technologies* - Demonstration house projects offer the builder the opportunity to try new and unproven building technologies and innovative building materials. This is especially true when the project is trying to achieve a green building certification or perform at a high level of energy efficiency. Demonstration house projects that have a specific energy conservation theme often attract sponsors that are anxious to submit their building products to the real world of the jobsite. Because of the level of attention and support manufacturers agree to provide to the project, builders can enjoy training and a greater degree of customer service from sponsors.

Green building programs and industry recognition -Green building certification programs like DOE Challenge Home and ENERGY STAR or green building certifications like LEED-H and National Green Building Certification are issued to the house and builder and are a direct acknowledgement of the work the builder has done to create a more energy efficient house. While sponsors may hope to achieve validation by being associated with green building projects, the builder is actually the name on the certificate and can use that recognition to help support their company brand. When sponsors like the DOE through the BA program approach builders to participate in a demonstration house, the builder can expect not only additional funds to help offset construction, but also technical support and monitoring of the house to ensure it achieves the expected level of energy efficiency.

"When we incorporate sponsors' new products in the demonstration houses we get immediate feedback at the event. We pretty much immediately find out what will work and what will not. Doing so, we, as a company, feel like we lead the rest of the industry in coming out with new products."

Mike Draper, Manager, <u>Plant City</u> <u>Building Center</u>, Palm Harbor Homes.

*Lead generation* - Demonstration homes that are built for large industry events will almost always host special events and press conferences to promote the theme of the project and also draw more national and local attention to the efforts and contributions of participating sponsors. During these activities, the spotlight is cast directly on the builder. In the same way that a builder creates a model home to promote sales in a development, the demonstration house can act as a magnet for potential customers looking for a builder who can deliver quality, innovation, and energy efficiency.

#### **Challenges of Builders Associated with Demonstration House Projects**

The challenges associated with building a demonstration home can be fairly obvious, and are typical of the problems builders face in the normal course of business. However, even though the challenges may seem regular, the task of completing a demonstration house is complicated by the fact that, unlike a normal building scenario, many other vested interests are concerned about the completion of the project besides the homebuyer.

*Compressed building schedule* - One of the most common problems for builders associated with demonstration houses is a compressed building schedule. This problem is compounded by:

• Sponsors trying to make sure their product donation is well positioned.

"The best and biggest things that happen to us during these demonstration homes are that we get intimately involved with these new products and how difficult or easy they are to install."

Mike Wnek, Sr. VP of Sales and Marketing for the Southeast Region, Palm Harbor Homes.

- Media companies vying for time in the building to document, film, and report on the progress of the project.
- Technical teams working to ensure that the building technologies being used in the design and construction of the house are done appropriately.
- Producers trying to keep all contributing parties satisfied while maintaining control of the budget.

During the final stages of the process, as the house is being closed, the builder may face an additional burden of prepping the house for public tours while also trying to put the finishing touches on interiors. As part of the final preparation, builders may also have to create mock-ups or special installations to showcase products or building technologies used in the house. In addition, it is not unheard of for sponsors to want to include products so new they are not field-tested and, in fact, are non-functioning. All of these issues can contribute to the stress and workload of the builder at a time when they are about to be put into the spotlight and have their work examined and commented on by the general public.

#### Lessons Learned from Successful Builders Associated with Demonstration House Projects

When interviewed, builders who are successful with demonstration home projects agreed on several common lessons that they have learned over the course of completing multiple demonstration home projects. These lessons include:

• Pre-selling the house. Although rare, in the recent past some demonstration homes have remained unsold for several years after the main industry event. An unsold demonstration house can be a costly liability for the builder, as well as a difficult marketing mistake to overcome.

- Set clear boundaries and expectations with the producer and sponsors. The builder should remain in control of the construction schedule and jobsite, which means it is crucial that prior to beginning work on the project everyone involved understands the goals, timeline, and critical steps necessary for the builder to successfully close the project before the industry event.
- Keep a consistent team. For builders working year to year on demonstration houses, using the same technical team, media team, and producer greatly contributes to a successful project.
- For builders participating in BA related projects, it is important to coordinate with the BA teams early to get ahead of potentially complicated or new building techniques, designs, products, or technologies. The more educated the builder is about building science; the easier it is to build a higher quality home.

## 3 Communicating the Energy Efficiency Message in Demonstration House Projects

Demonstration house projects that focus on increasing public awareness of energy efficiency in homes have a greater challenge than traditional "show" homes. Not only do the homes have to overcome the normal gauntlet of challenges involved in building or retrofitting the house and prepping it in time for the event, but these projects also have to communicate the energy efficient message as well.

A National Association of Homebuilder's Research Center (NAHB-RC) survey in December of 2007 asked a group of homeowners what their priorities would be if they had an extra \$5,000 to spend on their homes. The survey found that 74% of the homeowners elected to improve comfort and design features like new countertops, upgraded flooring, and remodeled bathrooms while only 26% said they would use the funds for energy efficiency improvements to their home. This speaks to one of the core challenges the DOE faces when trying to inform homeowners about the importance of energy efficiency upgrades to existing homes. When beginning a home improvement project, most consumers think of it as remodeling, not retrofitting. Likewise, in new home construction, even with the recent growth of "green" construction companies, most homebuyers look for comfort and amenities before concentrating on energy efficiency.

"The last couple of years, there has always been a **Building** America presentation done in the home at IBS. Last year was a big breakfast for the Builder's Challenge certification. That was really kind of neat because you had all these other big builders like Pulte and Horton there to receive their awards for building high-energy efficient houses. To have them there in our houses and see them picking up on what we do makes you feel pretty good.

Mike Draper, Manager, Plant City Building Center, Palm Harbor Homes

Ultimately the success, certainly from the sponsor's point of view, of a demonstration project will be determined on how successful the communication strategy to market the project is planned and executed. Even though the house may accomplish all the goals of closing on time, prepped for tour guests, achieving the required level of energy efficiency, and coming in on budget, if the public is unaware of the project and message, the project will be considered a failure.

#### How to Communicate to the Building Industry

The BARA team recently conducted a study to determine the information needs of non-energy focused remodelers, in order to determine how to effectively communicate energy efficiency and building science to the residential remodeling community. The study, which questioned nearly 1,000 building industry professionals, found that remodelers respond most favorably to trade magazines and in-person training for exposure to building science and technical information on improving energy efficiency.

The first section of the evaluation was to determine the types of businesses in which respondents were involved. Of the total, just over half identified themselves as self-employed general contractors. The second largest group identified themselves as general contractors with payroll (that is, employees). The remaining nearly 27% identified themselves as special trade contractors, both with and without payroll.



What type of business do you have?

Figure 9. Study: Type of Business

The majority of those who identified themselves as special trade contractors specialized in insulation followed by finish carpentry. Siding, electrical, and framing all tied for third in terms of the number of respondents. Roofing and flooring, tiling, and other finishing tied for fourth with HVAC, plumbing, other type, and drywall completing the list in order.

Next, remodelers were asked to rate nine types of media in terms of value to them. Answers were scaled from 1=not valued to 5=highly valued. What this survey showed is that industry professionals are still looking to traditional communication methods for information about building science. The top three sources of information for building professionals were:

- 1. Trade magazines
- 2. In-person training events
- 3. Industry peers.

The lowest scoring sources sought were online blogs and social media websites.



How valuable to you are the following types of energy efficiency information? (1=not valuable, 3=somewhat valuable, 5=highly valuable)

Figure 10. Study: Value of Information types

What this study suggests is that building industry professionals have specific preferences when it comes to how they are exposed to building science information. For a demonstration house project with an energy efficiency focus, understanding what marketing channels work best to reach the target audience is a critical part of a successful communication strategy.

#### **Communication Strategies for Demonstration House Projects**

Most demonstration house and show house projects employ the same techniques for communicating with their intended target audience. However, with the rise and acceptance of social media, hand-held mobile communication devices, and easier and cheaper access to video creation, new formats and communication avenues are being utilized.

Communication plans for demonstration houses can be broken down into three specific phases: pre-event, show time, and post-event.

#### **Pre-Event Communication Tools**

A successful communication plan to market the demonstration house begins early in the process and is used to help draw in potential sponsors as well as raise general awareness of the project in the industry. As the event and unveiling of the demonstration house project draws near, the amount and variety of communication tools used to attract interest to the project increases. Some of the most common communication tools used prior to the industry event include:

- Blogs that follow the project from beginning to completion
- Industry newsletters that connect specific sponsors' products to the project

- Articles and educational material developed by the media sponsor and distributed through various channels
- "Micro websites" or websites with limited pages that can be linked to from other online publications
- Paid advertisements in trade magazines
- Bulk email and traditional mailings
- Invitations to industry VIPs for exclusive events to be held at the location
- Local media contacts
- Social media sites like Twitter and Facebook
- Contests with incentives and rewards to encourage public participation in the project
- Local trade association announcements.

#### Showtime Communication Tools

Once the demonstration home is complete and open to the public, the communication tools employed become much more immediate and specific to the event. Typically, there will be events, awards ceremonies, parties, meetings, and press conferences held at the house, but most of the communication work during the event will be geared toward the attendees who tour the house. This is the best time for the project producer to directly interact with builders, architects, interior designers, real estate agents, manufacturers as well as "People have to tour the house and see it. It's like if you are going to go buy a car you want to test-drive it and kick the tires. Virtual tours don't offer the "awe" factor."

Tucker Bernard, The New American Home Project Executor

the potential homebuyer public. Successfully communicating the key elements during the tour is critical if the project is going to create a strong enough impression on the visitors to generate sufficient sales leads for the sponsors, or, in the case of an energy efficiency demonstration house, promote the acceptance of new building technologies. Some of the most common communication tools used during the industry event are:

- Signage, banners, stickers, dry erase boards, and labels
- Sponsors' exhibits and their sales team efforts to drive traffic
- Live blogs, radio shows, podcasts, or video blogs that cover the event
- CDs with promotional materials, digital sales sheets, resources, and links to related websites distributed via exhibitors, show management, and media partners
- Representatives from sponsors and builders to help guide the tour and answer questions
- Televisions in the houses running sponsors' commercials and broadcasting online and back to sponsors' exhibits
- Digital photo frames that rotate images of the construction process and building materials and technologies used

- Personal, self-directed audio and video tours
- Social media including regular Twitter and Facebook updates and instant messaging
- Stacks of promotional literature.

Demonstration house projects will use these traditional tools, but can also employ other tools to help convey how the house is performing at a higher level of energy efficiency. Some recent projects have installed digital readouts that display the amount of energy the house is using and the percentage being generated onsite from renewable

sources. Often, when insulation, wiring, or plumbing has been improved, cutaways in wall cavities will show tour attendees things normally hidden behind the drywall.

#### Post-Event Communication Tools

More than ever, after the industry event is over, the demonstration house project can continue to draw interest, generate leads, and communicate a positive energy efficient message. The general shelf life of a demonstration project is about one year after the event is over. However, high profile events with sustainable themes such as the Sarah Susanka "Not So Big Showhouse" continue to draw interested visitors five years later. During that time, a new set of communication tools are employed to help keep the momentum of the project going. Also, the post-event "You have to keep people involved even after they walked through the home. People learn things and get inspiration, but then once the show is over or the house is closed, within a couple of weeks or months they lose their excitement."

Craig Savage, ReVision House Las Vegas 2010 Producer

period is a time when an evaluation of the process and project is usually performed. These evaluation activities also serve as a communication tool to help continue the promotion and awareness of the demonstration house project. Some of the most common communication tools used after the industry event is over include:

- Feature articles and marketing analysis reporting on attendance, special events held in the demonstration house, and any green building certifications the house may have achieved
- Video interviews and highlights focused on sponsors and products used in the demonstration house
- Swipe card data collected during the tours given to sponsors for follow-up and additional marketing
- Surveys of tour attendees
- Virtual tours of the project hosted online.

#### **Communication Lessons Learned from Completing Successful Projects**

Although results from demonstration house projects vary greatly, there are several communication strategy suggestions offered by producers, builders, and sponsors of successful projects. These include:

- Communicate within the event to draw more tour attendees. Create a direct connection between sponsor's activities on the trade show floor and the demonstration project.
- Simplify the overall message. Create a simple message that will draw attendees' attention and create curiosity about the project.
- Determine your key audience and focus on motivating them. Often demonstration house projects will try to address every player in the building industry rather than focus on one core group and create a message for them. If the project is about energy efficiency, it is important to craft the message and then decide how best to deliver it.

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## Appendix A. Case Study: Cool Energy House



Figure 11. Cool Energy House - before

The Cool Energy House (CEH) is a demonstration home project aimed primarily at the residential building community and designed to show those builders and remodelers how energy efficiency retrofits can benefit their businesses by not only lowering their customer's energy bills, but also making their homes more comfortable and secure while keeping the costs low. This demonstration project was produced by BA teams, built by Southern Traditions, and sponsored in part by Scripps, DuPont, Johns Manville, GE, and others. The project was completed just before and shown during the 2012 IBS in Orlando, Fla.

The owners of the home, a young family of six, initiated a retrofit project with a local energy conscious custom homebuilder, Southern Traditions. The BA teams—BARA, the Consortium for Advanced Residential Buildings (CARB), and the National Association of Home Builders (NAHB) team—joined to offer their expertise in energy efficient retrofit design.

Before work began, CARB ran the initial home energy checkup. Data from the analysis was fed into the Building Energy Optimization (BEopt) software. This tool evaluates incremental energy and cost effects of different building designs relative to a reference building. The program provides a "least-cost" curve that allows users to determine minimum-cost building designs at various levels of energy savings. BEopt modeled the house and offered up optimized retrofit measures for the project. One of the primary goals of the CEH project was to explain in builderunderstandable terms, the value proposition of BEopt to the contractor's business model.



Figure 12. BEopt-generated chart of electrical loads



Figure 13. CEH window

Several measures were selected and undertaken based on the BEopt results. One of the primary challenges was improving the existing insulation. The energy audit showed that the existing kraft-faced, fiberglass batt insulation, although in-place most everywhere, wasn't installed carefully, and warm air was leaking in and circulating noticeably in the wall cavities during the summer months. In an onsite experiment working with Johns Manville, the teams tried blowing additional chopped fiberglass into the existing wall cavities, increasing the density, filling the voids, and demonstrably slowing the airflow

within them. In the attic, the scant few inches of existing fiberglass insulation was vacuumed up and an R-30 application of closed-cell

spray foam was applied to the underside of the roof sheathing, resulting in a completely air sealed attic and conditioned space while adding an additional wind-mitigating "hold down" to the roof assembly.

Another major undertaking was a window and door replacement. The windows in the house were a mix of single pane and double pane with aluminum frames. Again, BEopt showed that replacing the windows with



Figure 14. Blowing in new insulation

double pane, low-e vinyl frames was a practical, economical choice, so the existing aluminum windows were cut out flush to the brick veneer, and replaced with high-performance, low-e, vinyl windows. Care was taken to properly flash and seal the replacement windows.

BEopt also pointed out that with proper air sealing, increased insulation and better windows and doors, the two existing low SEER HVAC systems could be downsized from two 2.5-ton units to two, high SEER 2-ton units. A dehumidifier acting independently of the HVAC system matched with ultra-efficient bath fans rounded out the heating and ventilating retrofit, providing cheaper, cleaner, and better-conditioned air to the house.

All the appliances in the house were swapped out with state-of-the-art ENERGY STAR "smart-grid-ready" appliances that can communicate with the GE Nucleus Home Manager system, allowing the occupants to remotely manage their home energy usage and visualize it at home or away on their smart phones.

Ironically as it's not yet in the BEopt modeling tool, the pool pump and

pool heater change out turned out to be one of the most energy efficient measures taken to save energy. An approximately 90% drop in power usage resulted when the single speed pump was swapped out for a new variable speed version.



Figure 15. GE Nucleus Home Manager (Source: GE Home Energy Management, reprinted with permission

With help and guidance from the NAHB Research Center, the CEH project is on track to be certified as Silver in their GreenBuilder Certification program.



Figure 16. Pool equipment change out

In addition to the energy-focused retrofit, open walls and floors provided opportunities to locate areas where affordable enhancements could be made to the house for wind mitigation based on HUD guidelines formulated by the NAHB Research Center team.





Figure 17. The Cool Energy House - after

#### Media Partners Participation in CEH

Cygnus Building Media, publisher of Qualified Remodeler magazine, and The Scripps Networks, were the main media partners for the CEH project. Between the two sponsors, the CEH project was presented across many mediums and audiences in the time leading up to the show and will continue to be well beyond in virtual form.

The Scripps Network, through their HGTVRemodels outlet (http://www.hgtvremodels.com/), created a number of articles, videos, webinars, press releases, and websites about the project. These activities included:

- Media Alert Press Release about CEH and HGTVRemodels on February 6, just prior to the tour event.
- Promotion on HGTVRemodels homepage from February 8 thru February 29 with continual coverage of events at the home and updates on the project.
- Micro-website with videos, photos, and content related to the CEH.

To date, videos on the HGTVRemodels CEH micro-website

(http://www.hgtvremodels.com/home-systems/the-cool-energy-house/index.html) were viewed over 5,000 times by readers with significant spikes in activity on February 4 (1,670 video views)

and also on February 9 (590 video views) in conjunction with the Scripps, HGTV open house event. Plans going forward include a comprehensive tour of the finished house and doubling down on the promotion of the project which historically adds considerably more traffic.

Qualified Remodeler was also able to distribute considerable content about the project including:

- *Qualified Remodeler, December 11, 2012. (Reach-83,000 readers)* An extensive article on the entire CEH project from start to finish. http://www.forresidentialpros.com/article/10452900/the-cool-energy-house.
- *ForResidentialPros.com (Qualified Remodeler), micro-website.* A micro-website was created and hosted at <u>http://www.forresidentialpros.com/buildingamerica</u> that provided readers with over a dozen articles, videos, blogs, and photo journals of the CEH project

from start to finish. The overall site had 120,000 page views in December 2011 and 160,000 in January 2012. Site visits were roughly 55,000 and 65,000 in December and January, respectively.

In addition to this, other media outlets picked up or featured the CEH project. Some of these included:

 Mother Earth News Magazine, December 12, 2011-January 12, 2012. A short print magazine article with accompanying graphic highlighted the showing of the home and provided additional links and information about the project. <u>http://www.motherearthnew</u> <u>s.com/green-homes/cool-energygreen-remodeling-zmgz11zrog.aspx</u>.



Figure 18. Media station inside the CEH

Green Builder Magazine, DecemberFigure 18. Medi11, 2012. A short article on thefeatures of the CEH and information on touring the project.

• *Green Home Remodeling, website.* Overview of the project, expectations, and tour dates. <u>http://www.plan-and-build-a-house.com/green-home-remodeling.html</u>

- *Classic Metal Roofing, website.* Article on material selections for CEH that highlighted metal roofing. <u>http://www.classicmetalroofingsystems.com/1317/cool-energy-house-chooses-classic-metal-roofing-oxford-shingle/</u>
- *NDX Advantage, Simonton Windows e-newsletter*. Article on window selection and benefits for CEH. <u>http://www.ndxadvantage.com/jan2012/products.html</u>
- *Home Channel News, website.* Article featuring the CEH with tour dates and project expectations. <u>http://www.homechannelnews.com/article/cool-energy-house-celebrates-efficiencies</u>

*Yahoo News, website.* Feature article written by Clopay Garage doors on product selection and overall energy efficiency goals of CEH. <u>http://news.yahoo.com/clopay-canyon-ridge-collection-garage-doors-selected-doe-100027883.html</u>

• *SIPA, website.* Feature article on product and material selection for the CEH. <u>http://www.sips.org/industry-happenings/basf-fischersips</u>

In addition to this, five videos were produced and shown during the events at the CEH to help explain BEopt, and educate the attendees about the measures used in the project. These videos ran continuously in the home during events and tours, and were also featured on buses that were used as transportation to the CEH. They will continue to run on online virtual tours on Qualified Remodeler and the BARA team site <u>www.barateam.org/CEH</u>



The first video was an overview of the project that showed before, during, and after construction sequences, as well as behind the walls footage of the energy efficiency improvements made to the home. The second video specifically looked at the BEopt software, and how the energy

Figure 19. CEH micro-site videos

modeling tool was used in the design,

material selection, and energy efficient improvements to the home. The final video was a short animation called "What is Home Performance" that is intended to educate and encourage

remodelers, builders, and contractors to realign their business focus on energy upgrades to existing homes, similar to the CEH project.

Response to the videos has been favorable and the BARA team shared the presentations with media outlets to leverage the tools to further draw attention to the project. Home Energy Magazine included a link to the "What is Home Performance" video (<u>http://www.homeenergy.org/show/blog/id/227/nav/blog</u>) It is also on YouTube where, in less than two weeks, it was viewed over 500 times.

#### Showtime Events, Tours, and Sponsor Receptions

When the 2012 IBS opened, so did the CEH for visitors to tour. Information and directions to the home was distributed from supporters' booths at the show. There were roughly 20-30 visitors.

**GE** Customer Appreciation Night – On Wednesday evening, February 8, 2012, the CEH was used for a private party for GE's invited guests. GE mailed invitations to a select group of their best builder-customers and provided transportation back and forth between the convention center and the home. GE hosted approximately 75 guests who were schooled on the GE energy saving ensemble of appliances, water heaters, photovoltaics and home energy management systems.



Figure 20. CEH press event held February 9, 2012

The CEH Press Educational Tour – On Thursday afternoon, February 9, an event was held for members of the media designed to communicate core residential energy efficiency issues and how the DOE's residential programs address these issues. The intent of the event was to bring attention to the resources being developed by the residential buildings program and to provide an educational and outreach venue for the DOE, National Renewable Energy Laboratory (NREL), and BA teams. Sam Rashkin, Chief Architect for the U.S. Department of Energy's Building Technologies Program was the keynote speaker and addressed a crowd of approximately 30 people.

HGTVRemodels VIP Reception – On Thursday evening, February 9, 2012, HGTVRemodels hosted an open house reception for all interested IBS show attendees. Invitations were distributed in advance of and at the IBS and transportation back and forth between the convention center and the home was provided. HGTVRemodels hosted 150+ people.

#### **CEH Onsite Communication Tools and Lessons Learned**

Visitors to the CEH had a wide range of interactive communication tools to engage with at the CEH project. Informational signage, interactive "information stations," and looping videos on a



Figure 21. Chevrolet Volt with power chord in CEH driveway

large flat screen, provided more information about the energy efficiency upgrades to the home. In addition to this, sponsors and product manufacturers also had representatives present. GE offered free LED light bulbs, and CEHspecific printed take-aways and other promotional materials were given away at the project.

The overall intent of the marketing material onsite was to provide visitors with information about the project during their time in the house, but also to encourage continued interest in the products and building technologies used during the retrofit project.



Figure 22. Hand-cranked information stations provided an audio description of the energy upgrades to the home and required no additional power

During previous events and demonstration projects by BARA, the team noticed that traditional information stations often were less successful than desired at immediately transferring

knowledge to visitors. Based on this observation, information stations at the CEH project were modified to allow the users to access information much faster and easier than previously. Specifically, the BARA team realized that people in the trade show atmosphere are often too busy or distracted to spend any time "learning" about how to use the hardware/software-even how to click to make a video run or access more indepth information about the project. For the CEH demonstration stations, the user interface was modified to eliminate the user's need to click to start the video. Also, in order to capture more user information during this interaction time, the audio/video loop would stop automatically when the user opted to fill in the information forms or request more information. Attendees appeared to be interested in the topics, and sponsor representatives "hovered" around the stations to leverage the interest in their products and solutions In the case of the Window

Replacement station, an additional series of stenciled messages was applied on the wall directly opposite of the window itself to reinforce the video messaging.



Figure 23: Window Replacement station and wall graphics

During the course of events at the CEH home, it became apparant that videos should be designed to work without any audio, as often crowd noise made understanding the presentations difficult.

Following the event, a one-hour continuing education segment is being prepared, using repurposed information station content, for placement on McGraw Hill's Architectural Record Continuing Education Center. Projecting from past experience on that site, the CEH segment could draw over 4,000 one-hour Learning Unit certifications and 44,000 partial views to architects, engineers, code officials, and designers.





Figure 24. Information sheets available to CEH visitors



Figure 25. Solar panel display and explainer at the CEH

#### **Social Media and New Communication Strategies**

Social media communication channels like Twitter, Facebook, and Pinterest offer new opportunities to connect and maintain contact with potential industry lead and interested show participants. During the CEH project development and event schedule, the BARA team explored several different approaches with new social media mechanisms to engage potential visitors to the site.

With the expanded ability to quickly connect with an audience through social media sites, there are also new ways to evaluate and measure responses. The following are some basic metrics used for evaluating and understanding social media engagement.

*View* - This term is used to count the number of times individuals look at a website page on a computer or portable device. To draw a parallel to traditional print media, a view is very similar to 'reading an ad', not just getting a magazine in the mail, where an ad or article may never be seen. Online views are highly accurate and one of the best ways to evaluate the effectiveness of a communication strategy that drives people to an online message.

*Impression* - In a social media campaign using Twitter, impressions is equal to the total tweets times the total number of followers. This is not the same as views, it's the potential reach if every follower was watching their Twitter stream when the tweets were posted.

*Click-Through* - Similar to a "view" but in this case, it is possible to tell which URL link in the tweets was 'clicked on' to view the website page. This is a very important statistic to follow because it will indicate which specific tweets encouraged the most activity from the total potential audience.

*Tweet with Hashtag* - In the CEH campaign #ENERGYHouse was the hashtag. By tracking the hashtag with an online application like 'TweetReach' it is possible to determine the number of times a topic appears in the Twitter universe over a period of time. This is also how Twitter users were able to participate in the live Twitter Chat #KBTribeChat that featured CEH.

The following are some of the statistical results from the social media outreach strategy for the CEH.

- The CEH managed to get 134 Tweets with the Cool #ENERGYHouse hashtag, or about 5 per day. The project averaged 2,800 Twitter impressions per tweet (375,000 impressions/134 tweets) and had a reach of 84,000 unique twitter users.
- One challenge for the social media strategy is that the CEH website was not updated or supplying "fresh" content as often as the Tweets were being issued. This meant that when a Tweet would be crafted it was more often than not simply information and did not provide the audience with a new or distinct call to action.
- Invitation-only events like the sponsor events and press event did provide for updated website content and were more successful at engaging the audience, drawing 54 click-throughs.
- The live Twitter Chat proved to be a successful strategy in the six days leading up to the event, and including #KBTribechat (Cool Energy House featured) generated 51 attendees, 750 tweets, 1.5 million impressions and a reach of 106,000 unique Twitter users.
- The Pinterest boards created for the Twitter chat generated 166 click-throughs during the 1 hour chat, and another 34 views later for a total of 200 click-throughs.

All told, the social media strategy was a mixed success for the CEH house as it was able to connect with a regular cache of followers but was unable to provide enough original content to engage the audience for a prolonged period of time. Another challenge was that since the BARA team did not have a social media presence on Twitter prior to the CEH project, the total number of followers had to be grown from zero. To effectively use social media as a marketing and communication channel for demonstration home projects, it would be advantageous to for sponsors to build a large and growing following prior to initiating a social media marketing campaign.

## Appendix B. Profiles of Successful Energy Efficient Demonstration Home Projects

A successful project is one in which the energy efficiency message is delivered and leads are generated for the sponsors, builders, and producer. The following projects were deemed successes.

#### **Bimini House**

http://www.bapirc.org/casestud/ph\_homes2008/pdf/PHH\_ Bimini.pdf 3,644 sq. ft. two-story house Year: 2008 Tradeshow: IBS, Orlando, Fla. Construction type: New modular Producer: Florida Solar Energy Center and NREL for the DOE Sponsor/Media Partner: Reed Construction Media Builder: Palm Harbor Homes



Figure 26. Bimini House

Certifications: First EnergySmart Home label, Florida Green Home by the Florida Green Building Coalition, met Gold level standards in all sections except lot design, preparation, and development per the new NAHB National Green Home Building Program (nahbgreen.com).

The 2008 Bimini House was a culmination of other demonstration houses over the years. The builder team had worked together on previous houses and had established relationships. This allowed them to avoid the conflict and confusion that can sometimes plague new teams.

The end result was an award-winning home that earned the very first EnergySmart Home label ever issued. It generated over 5,300 unique visits by attendees from IBS. As a take away, a printed case study was made available. This material was so popular that all 800 copies were gone by the fourth day.



Figure 27. 2010 ReVISION House

#### **ReVISION House**

http://www1.eere.energy.gov/buildings/challenge/pdfs/ba\_ builderschallengespotlight.pdf 1,800 sq. ft. single-story house Year: 2010 Tradeshow: IBS, Las Vegas Construction type: Deep retrofit Producer: BMI, Green Builder Media Builder: Multiple contractors Certifications: HERS rating of -2 with photovoltaic panels in place, 44 without The 2010 ReVISION house was a deep retrofit of a home built in 1963. The project included a photovoltaic array on the roof, which was also redesigned to better insulate the home. This, combined with energy efficient steps like new insulation and windows, updated appliances, and improved lighting, created an extremely energy efficient house. In fact, it often supplied more energy than it consumed.

The timing of the theme for this house worked very well. The economic recession meant a greater interest in remodeling and retrofitting than perhaps in years past as well as an interest in reducing energy costs. The choice of a mid-century house also worked well as it fit in with the general mid-century revival trend.

Communication materials for the house included case studies, press releases, and websites including online modeling of the home, videos, and takeaways. There were tours held for the general public as well as events specific to IBS. A one-hour continuing education credit (CEU) course placed on the Architectural Record website continues to draw several thousand designers to the online story each year.

#### Home by Design

http://www.homebydesignshowhouse.com/2004/about/default.asp 2,900 sq. ft. two-story house Year: 2004 Tradeshow: IBS, Las Vegas Construction type: New construction Producer: Building Media, Inc. Sponsor/Media Partner: Hold Fast Communications Builder: Hilltop Development, Inc.

Home by Design was designed by well-known architect and author Sarah Susanka to demonstrate the "achievable dream house". In addition, building science and construction notables Steve Easley and Bob Heatherington joined the project. The celebrity of these three names was an immediate draw to the home, both in terms of gathering sponsors and in drawing visitors to the completed project. Curious consumers continue to visit the NotSoBig website to revisit this project.



Figure 28. Home by Design Showhouse

The communication tools for this project were substantial. Each sponsor got three different stories, advertorial, editorial and a mix that they could use as they saw fit. In addition, materials went up on websites and online publications. Visitors to the project were also given a CD takeaway describing the project and materials.

#### **Better Home Better Planet**

http://construction.basf.us/index.php?page=residential\_bhbp\_newConstruction\_nzeh 2,900 sq. ft. three-story house Year: 2006



Tradeshow: N/A Construction type: New construction Producer: BASF, PATH Sponsor/Media Partner: Hold Fast Communications Certifications: Platinum LEED rating, ENERGY STAR certification

Better Home Better Planet was a slightly different project. Unlike the others, this house was not built for a specific tradeshow or event. Instead, it was built as a proposed template for the City of Paterson's ongoing project to build 3,000 affordable housing units and as a showcase for BASF, the producer, sponsor, and builder for the project, technologies. The home was then selected by the U.S. Green Building Council's (USGBC) for pilot testing of the Leadership in Energy and Environmental Design for Homes (LEED-H) rating system. It earned a Platinum rating and also received ENERGY STAR certification.



Figure 29. Better Home Better Planet (Source: BASF Corporation; reprinted with permission)

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