



Market Potential for High Performance Homes in Vermont

**Market Analysis
&
Consumer Research**

November 12, 2014

For the

The High Meadows Fund,
Efficiency Vermont

And

The High Performance Home Working Group

Produced by:

Energy Futures Group
Vermont Housing Finance Agency
Milne-Allen Appraisal Co.
Fifth Element Associates



Researchers:

Market Analysis Researchers:



Richard Faesy and Jim Grevatt
Energy Futures Group
P.O. Box 587
Hinesburg, VT 05461
rfaesy@energyfuturesgroup.com
jgrevatt@energyfuturesgroup.com
802-482-5001
www.energyfuturesgroup.com

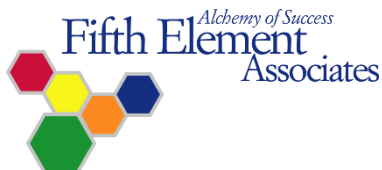


Leslie Black-Plumeau & Maura Collins
Vermont Housing Finance Agency
164 St. Paul Street
Burlington, VT 05401
lblack-plumeau@vhfa.org
mcollins@vhfa.org
(802) 864-5743



Amy McLellan
Milne-Allen Appraisal Company
P.O. Box 179
East Burke, VT 05832
milneallen@gmail.com

Consumer Researcher:



Claudia Eisinger
Fifth Element Associates
1069 Sunset View Road
Colchester, VT 05446
claudia@fifthelementassociates.com
802.878.9380
www.fifthelementassociates.com

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Introduction

This report is the compilation of two different but parallel sets of research into the potential market for high performance homes¹ (“HPH”) in Vermont. One set of research was conducted on Vermont’s market demographics and attempted to identify potential markets for high performance homes. The second set of research involved conversations with existing high performance home owners and potential buyers. This joint report includes both sets of research, reports out the findings and conclusions from each separately, then presents a combined set of recommendations.

The homes examined in this report include the “High Performance Mobile Home”² (or “HP Mobile Home”) and “High Performance Cottage Home”³ (or “HP Cottage Home”), representing two different types of high performance homes currently available in Vermont. Images from the designers and manufacturers of these homes are reproduced below in Figure 1.

Figure 1. High Performance Mobile Home (estimated \$107,000 plus land and site costs; 980 sq. ft. with 2 bedrooms and 2 bathrooms) and High Performance Cottage Home (estimated \$165,074 plus land and site costs; 1320 sq. ft. with 3 bedrooms and 2 bathrooms)



Executive Summary

The executive summary presents separate high-level findings from the market analysis and consumer research and then summarizes the joint conclusions.

Market Analysis

The market analysis portion of this research was conducted by a team made up of the Energy Futures Group (EFG), Vermont Housing Finance Agency (VHFA) and Milne-Allen Appraisal Company (Milne-Allen), (“the Team”). The Team’s work focused on analyzing the Vermont demographics and potential market for high performance homes and also included interviewing mobile home dealers. The findings and conclusions from this research are presented here.

¹ From the RFP: “High performance homes” employ advanced energy-efficiency technology to minimize the homeowner’s monthly energy costs. In addition, durable, well-constructed components will reduce future maintenance needs and should result in the homes holding their value instead of depreciating over time.

² Based on the “HP Mobile Home” home, for the purposes of this report; see <http://www.vhcb.org/mhip/> and <http://highperformancemodulars.com/>.

³ Based on the “Mansfield Irene Cottage Home”, for the purposes of this report; see <http://www.studionexusarch.com/irene/>.

Market Demographic Research

In 2013, 5466 primary residence, single-family homes were sold in Vermont, with 40% of these in the Burlington “Metropolitan Statistical Area”⁴ (MSA). The highest priced homes (i.e., over \$332,000) in the state were most often sold in the MSA, while the lowest-priced homes (i.e., homes selling for less than \$160,000) were most often sold in Southern Vermont⁵. In the other three regions of the state, Addison-Lamoille-Washington Counties, Orange-Windsor, and the Northeast Kingdom⁶, each sold about 500 of the lowest-priced homes.

Purchasing a high performance home entails the cost of the home plus lot, site work and foundation costs⁷. These costs are summarized in Table 1 below. A buyer of a HP Cottage Home would need an annual income of almost \$99,000 in the MSA or \$72,000 in the Northeast Kingdom, with an average of about \$80,000 statewide. In order to afford the HP Mobile Home on owned land a buyer would need an annual income of more than \$81,000 in the MSA, more than \$55,000 in the Northeast Kingdom, or almost \$63,000 average income statewide. For a buyer of the HP Mobile Home on a rented lot in a mobile home park the average income needed is about \$55,000 statewide.

Table 1. HP Cottage and Mobile Home Total Costs and Required Income to Afford⁸

High Performance Home on Purchased Land

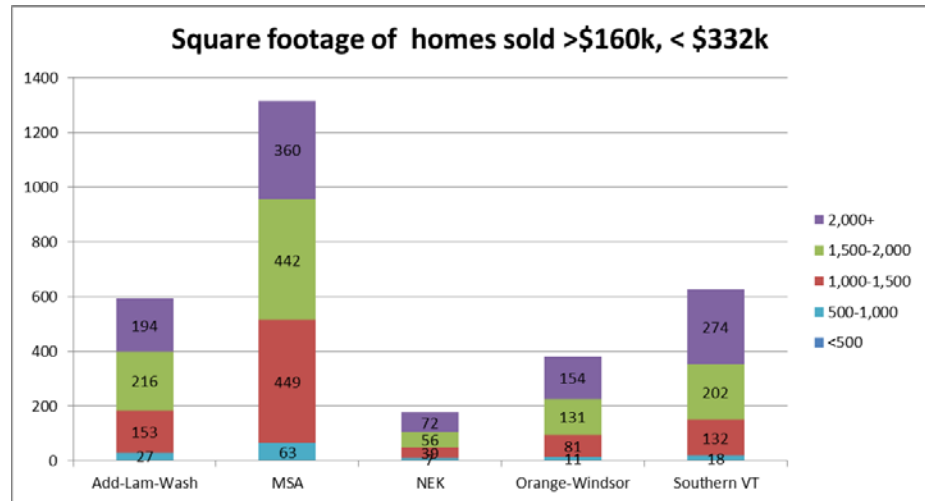
	MSA	Southern VT	Wash-Lam-Add	Orange-Windsor	NEK	VT
Median lot cost	\$ 119,000	\$ 47,000	\$ 59,500	\$ 36,000	\$ 30,000	\$ 55,000
Site work and foundation	\$ 47,775					
HP Cottage Home cost	\$ 165,074					
HP Cottage Home Total Price	\$ 331,849	\$ 259,849	\$ 272,349	\$ 248,849	\$ 242,849	\$ 267,849
Income required to afford HP Cottage*	\$ 98,552	\$ 77,147	\$ 80,863	\$ 73,877	\$ 72,093	\$ 79,525
HP Mobile Home cost	\$ 107,000					
HP Mobile Home Total Price	\$ 273,775	\$ 201,775	\$ 214,275	\$ 190,775	\$ 184,775	\$ 209,775
Income required to afford HP Mobile*	\$ 81,309	\$ 60,106	\$ 63,834	\$ 56,824	\$ 55,219	\$ 62,641

Data source: VT Property Transfer Tax data on price of lots sold in Jan 2012-June 2014 and site improvement estimates and home pricing information provided by VEIC and Vermont Housing and Conservation Board.

⁴ The Metropolitan Statistical area includes Chittenden, Franklin and Grand Isle Counties.
⁵ Southern Vermont includes Rutland, Bennington and Windham Counties.
⁶ Northeast Kingdom includes Essex, Orleans and Caledonia Counties.
⁷ For the purpose of this analysis, any additional development costs, taxes, etc. are not included.
⁸ For homes on purchased land, assumes a 30-year fixed rate mortgage with 5% down payment and average VT insurance, taxes, closing costs and interest rates. Estimated income required to afford home is based on 30% housing cost-income affordability ratio.

Despite the higher cost of land in the MSA, more households in the MSA have the incomes needed to afford the three types of high performance homes (i.e., HP Cottage Home on owned land, HP Mobile Home on owned land and HP Mobile Home on rented lot) than any other region. However, most conventional homes sold in the high performance homes price range of \$160,000 to \$332,000 are larger

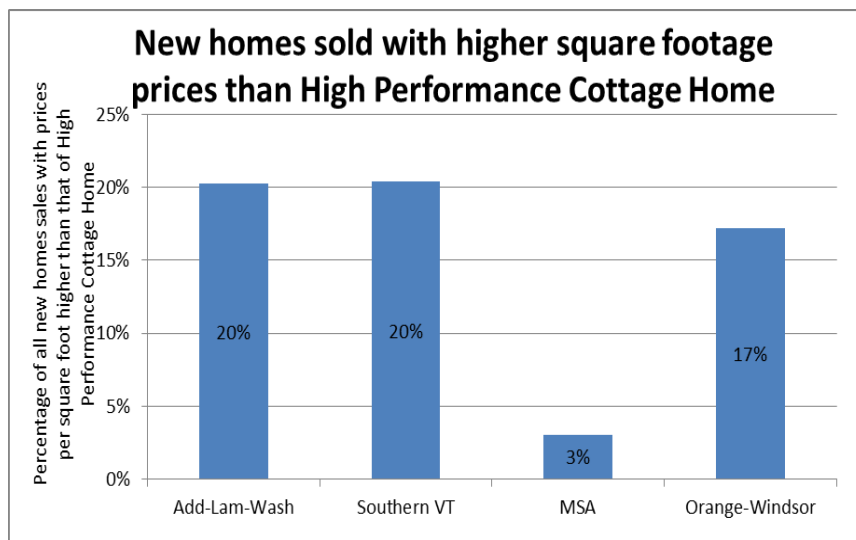
Figure 2. Square Footage of All Homes Sold in 2013 >\$160, 000 and <\$332,000



Data source: VHFA analysis of homes sales data from the Northern New England Real Estate Network.

than 1,500 square feet, with at least three bedrooms. The HP Mobile Home model we studied contains 980 square feet of living space and two bedrooms. This means that buyers with incomes high enough to afford the HP Mobile Home are also likely to be able to afford many larger, conventional homes for sale. The HP Cottage Home's 1,320 square feet of living space and three bedrooms come closer to the size of the typical home sold, but is still substantially smaller than most homes, as is shown in Figure 2. As shown in Figure 3, when focusing exclusively on the sales of new homes, the price of the high performance homes becomes much more competitive, especially for the larger HP Cottage Homes in regions outside of the MSA. Factoring in both the cost and size of the new homes sold in each region in 2011 through 2013 indicates that the areas outside the MSA are more fertile for potential HPH buyers.

Figure 3. New Homes Sold with Higher Per Square Foot Prices than the HP Cottage Home

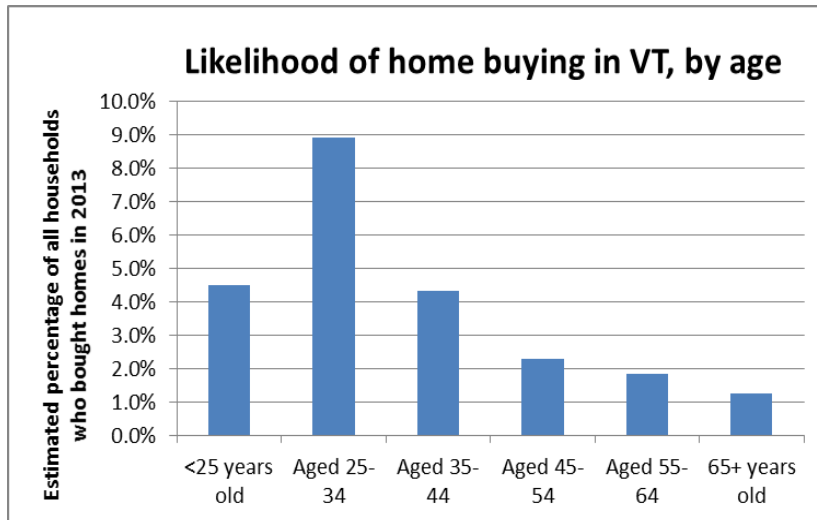


Data source: VHFA analysis of 2011-2013 homes sales data from the Northern New England Real Estate Network.

Roughly 17% to 20% of the new homes sold in regions outside of the MSA had higher prices-per-square-foot than the HP Cottage Home. And a substantial portion (38%) of the new homes sold outside of the MSA are sized comparably to the HP Cottage Home. Due to the low number of new home sales in the Northeast Kingdom, that region is not included in this analysis.

Vermonters aged 25-34 are at least twice as likely as any other age group to buy homes.

Figure 4. Likelihood of Home Buying in Vermont by Age Bin



Data sources: U.S. Census 2010, American Community Survey 2008-2012 and National Association of Home Builders.

Figure 4 shows that an estimated 9% of all households headed by someone aged 25-34 buy homes in Vermont each year. For older households, the likelihood of home buying declines with age. Only about 1% of all households headed by someone at least 65 years old are likely to buy a Vermont home each year.

Based on this information, it appears that the MSA and Northeast Kingdom will be the locations most challenging to sell HP Homes. In the MSA where the median household income is about \$60,500, due to the high land costs, it is going to be

challenging to sell HP Mobile Homes. Buyers would need an annual income of about \$81,000 to afford to purchase a HP Mobile Home or \$99,000 to purchase a HP Cottage Home on owned land, but they may not want those homes because households with incomes at this level can afford many of the larger homes that are typically on the market. At the same time, in the Northeast Kingdom, there are too few households and very little market for new homes.

Based on this analysis, it appears that while the low income community could most benefit from the reduced operating costs of these homes, their incomes are too low to afford them without some sort of subsidy. This may need to be in the range of approximately \$50,000 per home, which was the amount of subsidy that was found to be needed for the pilot phase of developing and selling Vermont's HP Mobile Homes.

Additionally, although older households may have more assets from equity in their existing homes and are growing in terms of numbers as the population ages, they are substantially less likely to move than are 25-34 year olds.

In matching markets to products, it appears that because of high land costs, the MSA would need to site dense neighborhoods of HP Homes, similar to a mobile home park. While the Northeast Kingdom has lower land costs and mobile home parks, it has an older population that is less likely to move, lower incomes less likely to be able to afford new HP Homes, and very little new construction happening.

However, Southern and Central Vermont could have some market potential. Based on home prices and the sizes of new homes sold, the median home prices are within \$10,000 of the estimated HP Cottage Home price—and new homes in these regions at this price point are comparable in size to the HP Cottage Home.

Mobile Home Interviews

In addition to conducting the market demographic research and analysis, the Team also interviewed four of the ten major Vermont mobile home dealers⁹. Each dealer stated that the current mobile home buyer market would find a price tag of \$100,000 too expensive when compared to other options available. The dealers did not believe that the additional energy savings of a net-zero home when compared to their standard home would justify the higher initial purchase price of the net-zero home. The most expensive *double-wide* mobile home currently available costs less than \$100,000. Among all homes sold by these dealers, 80% to 95% are new (rather than existing homes being re-sold). The dealers explained that mobile home sales are predominately for homes that will be going on owned lots and that most sales are double-wide mobile homes.

Most mobile homes sold by the interviewed dealers are financed, although sales to buyers who are down-sizing are often cash sales. The typical mobile home buyer who is financing is “maxed out” in terms of taking out the largest mortgage for which they can qualify. The dealers also noted that appraisals make the financing process difficult.

Conclusions

Based on the data and analysis from the market demographics research, we draw the following conclusions:

- There is a very small existing market for single-wide mobile homes of any kind in Vermont, but for HP Mobile Homes, there is virtually no “market”¹⁰ without some sort of subsidy or siting that reduces land costs.
- HP Cottage Homes (and potentially site-built HPHs) represent a tiny sliver of the potential for the new homes market. There may be some opportunities in certain markets in the state, but there are significant cost hurdles to overcome.
- People typically obtain, and perhaps logically expect more in terms of conventional features at the price point of these HP Homes (size, bedrooms, etc.).
- It is going to be very challenging to create new markets and build demand for HPHs.

Qualitative Consumer Research

Based on the multiple interviews and focus groups of high performance home owners and potential home buyers from various market segments, the summary of key takeaways from the consumer research follow:

⁹ RAN-MAR, Inc. of Barre, Fecteau of Barre, Moores of Rutland and Beans of Lyndonville

¹⁰ For the purposes of this study, we define “market” as: a large enough group of potential buyers with common characteristics and interests to warrant shaping outreach and marketing to respond to their particular wants and needs.

- Multiple barriers need to be overcome in order for consumers to consider and buy a High Performance Home. The barriers are even greater than those that exist for traditional homes, given the relatively low awareness of High Performance Homes, price of the homes and complexity of the systems and technology related to energy efficiency that is involved. Furthermore, such barriers for those at lower income levels are even higher than the rest of the population, given the greater instability in their lives and their limited economic means.
- Most participants reacted very favorably to the concept of a High Performance Home, but seemed to believe that there must be a catch. The very first reactions to the mobile home and cottage home concepts, which present a combination of benefits, were positive. However, a series of questions quickly followed which need to be addressed. Additionally, participants shared a high level of skepticism, especially when considering the financial aspects (total cost of ownership and degrees of cost savings from energy efficiencies). (See High Performance Home concepts shown to participants on pages 74 and 75.)
- It does not appear that any of the demographic groups in this research are clearly an ideal fit for a High Performance Home, but some psychographic attributes surfaced. In addition to understanding the needs, as well as the living and financial situations of different consumer types and individuals, gauging one's degree of comfort with change, the unknown, and taking risks are important. One observation is that most people who gravitate towards High Performance Homes tend to be very analytical.
- For the most part, consumers reacted positively to the financing concepts presented in the research; however, no single financing tool presented is likely to address all of the barriers for a potential buyer. Multiple financing solutions will likely need to be offered and "layered" into a solution that works for individual buyers. Financing solutions for low income buyers will likely need to consider including mechanisms that allow for greater flexibility, such as allowing for occasional partial or missed payments. (See financing concepts shown to participants on pages 76 to 79.)
- Early Adopters find living in their High Performance home much better than imagined. Every day they are reminded that they have actively chosen to live in a way that is more cost effective, *without compromising on quality*, and that supports a more integrated, environmentally-conscious lifestyle and impact. However, the learning curve of understanding and mastering the technology and systems is important to maximizing the quality and energy savings benefits.
- A number of the unknowns associated with owning a High Performance Home are taken care of when potential consumers visit an actual home, as well as talk to experts and existing homeowners. For example, among the early adopters who currently live in one of the Charlotte developments, being able to walk through an existing home (to see, feel, touch, and get a sense of its construction) and talk to a key expert and current residents played an important role in moving them forward with their decision to own such a home.

- Traditional marketing may help raise awareness, but the “sell-in” process for these homes will likely require a “higher touch” approach. Given the complexity of each buyer’s situation and the barriers that need to be addressed, understanding and addressing individual circumstances, questions and fears, and needs will likely be required to move a potential buyer towards actual purchase. And, different barriers need to be identified and addressed along the journey to actual home purchase.
- Neither “High Performance Homes” nor “Net Zero” are strong enough names in their current form.
- Potential homebuyers seek a “trusted advisor” to help them enter into and navigate the High Performance Home building/buying process. Part of what made it possible for the early adopters in this research to move forward was having an expert, whom they felt they could trust and rely on, guiding them each step of the way. It was someone whom they knew personally or had been introduced to by a trusted source (Efficiency Vermont, Champlain Housing Trust, etc.). Those who seemed to experience high levels of stress and disappointment did not feel they had a reliable and trusted expert during the process.

Recommendations

These recommendations draw from both sets of research summarized above, and are discussed in further detail later in the report.

Based on the research, there is not a market for HPHs in Vermont— yet. However, there also weren’t markets for many innovative products— such as the iPhone— when they were first created. The question remains, “If you build it, will they come?” The researchers believe that are avenues to pursue to increase the chances that they will, as outlined below. However, it seems clear that building a market for these homes will require a significant effort with small returns for at least the near future.

Focus on Consumer Needs

Throughout the planning, development and implementation efforts, make sure to focus on and highlight the HP Home features that respond to what buyers say they need. Identify the compelling story for why these houses are a smart choice, including the important emotional benefits related to the esthetics and design, the quality of living, etc.

Overcome Skepticism

Overcome the skepticism that these homes are “too good to be true” by publicizing actual energy bill data, developing testimonials, developing and supporting a HP Homes owner network through blogs and other avenues, and evaluating the early experiences. A “trusted advisor” who can support potential buyers through the process may be an important element in overcoming skepticism.

Legitimize HP Homes

High Performance Homes need to be brought into the mainstream. To do this, sponsor awards that feature HP Homes at widely attended events like the Home Builders and Remodelers Association’s

“Better Homes Awards”, Efficiency Vermont’s Better Buildings by Design Conference “Best of the Best Awards” the Vermont Statewide Housing Conference, and other events.

Improve Financing

Financing HP Homes can be a significant barrier that needs to be overcome if buyers are going to be able to qualify for and purchase these homes. Partner with willing lenders who are able to control their underwriting standards locally to enable more flexibility, and help them to develop simple, accessible, affordable, workable, pre-packaged financing that buyers can access to increase the likelihood of qualification.

Improve Appraisals

Addressing appraisal issues will be key in recognizing the true value of these homes and permitting buyers to qualify for a higher mortgage amount. Efficiency Vermont and the Vermont Green Homes Alliance¹¹ should continue the on-going partnership with Vermont Association of Professional Real Estate Appraisers in order to build a statewide list of “competent” appraisers. Align qualified appraisers with partner lenders for the best chance of maximizing appraisals on HP Homes.

Pursue Partnerships

The movement to develop a “market” for HP Homes is going to require many efforts on multiple fronts. This will include multiple partners and a concerted effort to identify and develop partners who can “champion” HP Homes. Efficiency Vermont and VHCB should certainly continue in that role, but it will also be necessary to build collaborations with other organizations and individuals as well in order to advance the movement.

Segment the Market

In thinking about the HP Homes market and planning for efforts going forward, it makes sense to segment it into its distinct parts, since each segment will require different approaches and partners in order to succeed. The broader market for new homes breaks out into the subsidized market (for both rental and ownership) and the conventional market in terms of HP Homes. These are discussed in more detail below.

¹¹ <http://www.vermontgreenhomealliance.org/>

Market Demographic Research

Background

In collaboration with key partners in the High Performance Home Working Group the High Meadows Fund (HMF) is working to transform the market for replacement of manufactured homes and for new modest scale homes affordable to low and moderate income Vermonters. The High Performance Home Working Group members include CVOEO Mobile Home Project, Efficiency Vermont, The High Meadows Fund, The University of Vermont Dept. of Community Development and Applied Economics, The Upper Valley Housing Coalition, The Vermont Department of Housing and Community Development, and The Vermont Housing and Conservation Board.

The project partners' goal is to transform new home design and the market for replacement of manufactured homes toward housing designs that meet the High Performance Home standard, with an emphasis on homes affordable to Vermonters with moderate incomes.

Figure 5. High Performance Mobile Home & High Performance Cottage Home



Scope of Work

The HMF issued an RFP in March 2014 seeking proposals “to analyze potential markets for high performance homes of modest scale, in particular the Irene Cottage Home and the High Performance Manufactured Home”. Energy Futures Group (“EFG”), the Vermont Housing Finance Agency (“VHFA”) and Milne-Allen Appraisal Co. (“MAAC”) responded as a team (“the Team”) to conduct this Market Analysis for High Performance Homes.

The Team analyzed potential markets in Vermont for high performance homes of modest scale in order to facilitate the transformation of the Vermont market for energy efficient manufactured homes and new modest scale high performance homes— especially those that are affordable to low and moderate income Vermonters. We conducted a Vermont market analysis with the guidance of—and in collaboration with—HMF and other members of the Working Group and their consumer research consultant, Fifth Element Associates.

The Team acquired market data and identified opportunities that support the project partners' goal and addressed the following questions:

- Is there a “fertile market” for modest scale high performance homes in Vermont?
- How is this market characterized, including the most promising features; geography, age, gender, income or other?
- How will potential buyers value energy and design attributes and what role do those considerations play in a purchasing decision? What other factors enter into purchasing decisions?
- What are the potential specific markets, and how are they distinct for the manufactured homes and modest scale modular or site-built homes, such as the Irene Cottage?
- What housing options do moderate income Vermonters choose now, and what features of comparably priced homes are more or less attractive than these high performance homes?
- What assistance or financing tools would help Vermonters of moderate means (between 80% and 120% of median income) afford to purchase the homes?

To aid the Working Group in informing their next steps in promoting and advancing modest scale high performance homes, the Team also analyzed the market potential of buyer groups, including:

- Vermonters who have the credit history and financial capacity to have a mortgage of \$75,000;
- Low income Vermonters who may need a significant subsidy in order to be able to afford the home;
- Farms that need to provide housing for farmworkers;
- Agencies and nonprofit organizations that purchase homes to make available to any of the above; and
- Vermonters who have the cash to purchase a home, either because they have recently sold a larger home, or because they have enough savings to pay for it.

Findings

The results of the Team’s research and analysis is presented below, followed by a section on conclusions. Fifth Element’s consumer research follows, and then a combined recommendations section presents joint recommendations from both sets of research.

Vermont Demographic Regions

Due to regional differences in home prices and demographic trends, we analyzed the potential market for high performance homes separately for five regions. These are shown in the map in Figure 6. Map of Vermont Demographic Regions and also in the accompanying Table 2. Vermont Demographic Regions.

Figure 6. Map of Vermont Demographic Regions



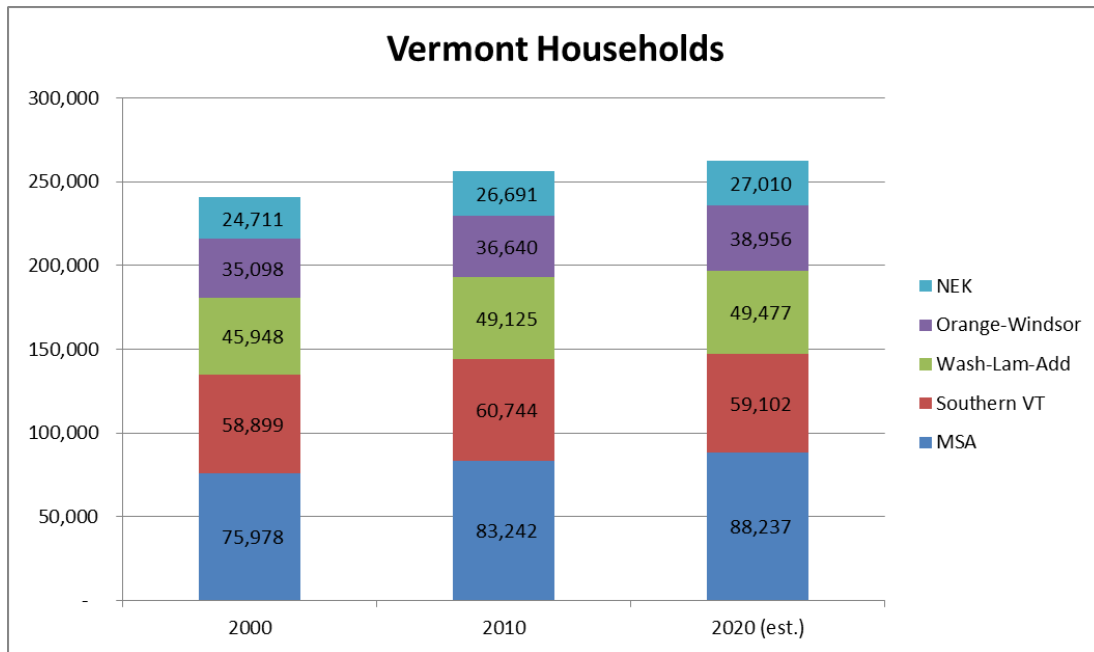
Table 2. Vermont Demographic Regions

Demographic Region	Counties
Metropolitan Statistical Area (MSA)	Franklin, Chittenden and Grand Isle
Washington/Lamoille/Addison	Washington, Lamoille and Addison
Northeast Kingdom (NEK)	Orleans, Essex and Caledonia
Orange-Windsor	Orange and Windsor
Southern Vermont	Rutland, Bennington and Windham

Vermont Households

As Figure 7 shows, the MSA is the largest region of the state, comprising a third of the state’s households. Growth in the number of households living Vermont is expected to slow to 2% between 2010 and 2020, with most of the new households expected to settle in the MSA.

Figure 7. Vermont Households by Year – 2000, 2010 and 2020 (estimated)

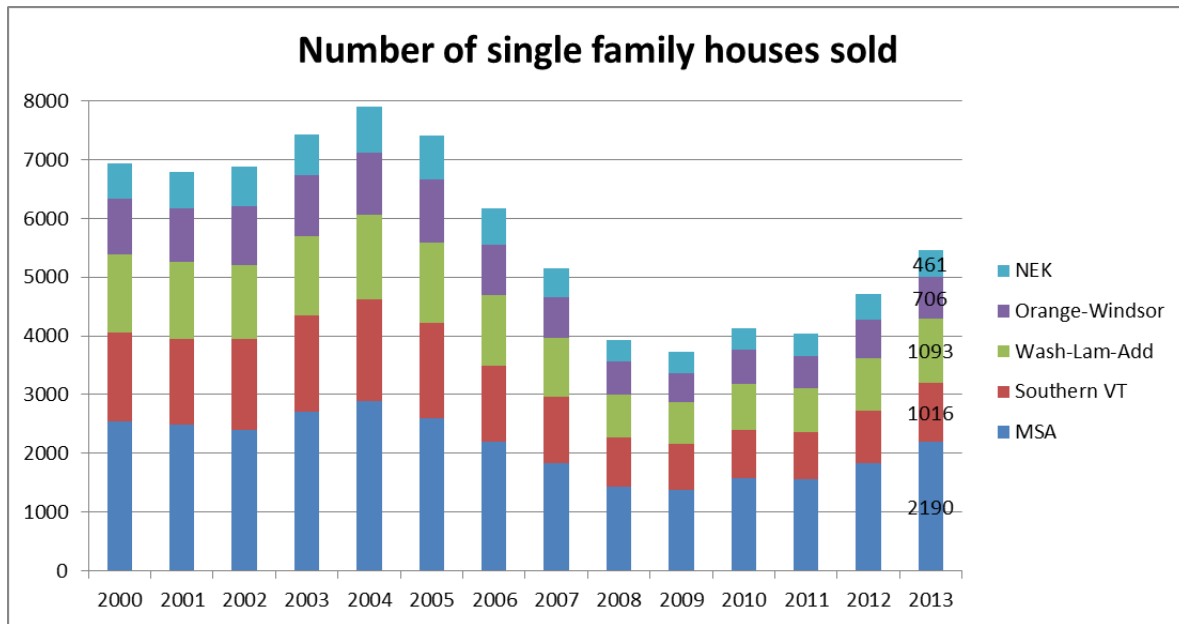


Data source: Census Bureau (2000, 2010), VHFA estimates based on population projections from the Vermont Agency of Commerce and Community Development and the Chittenden County ECOS project (2020).

Single Family Home Sales in Vermont

After the number of single family homes sold in Vermont reached almost 8,000 in 2004, like the rest of the U.S. the state felt the impact of the recession, and saw home sales bottom out at about 3,800 homes sold in 2009. In 2013, a total of 5,466 single-family houses were sold, with 40 percent of the sales in the MSA, followed by Washington-Lamoille-Addison, Southern Vermont, Orange-Windsor, with the NEK at 461 homes sold.

Figure 8. Single Family Home Sales 2000-2013

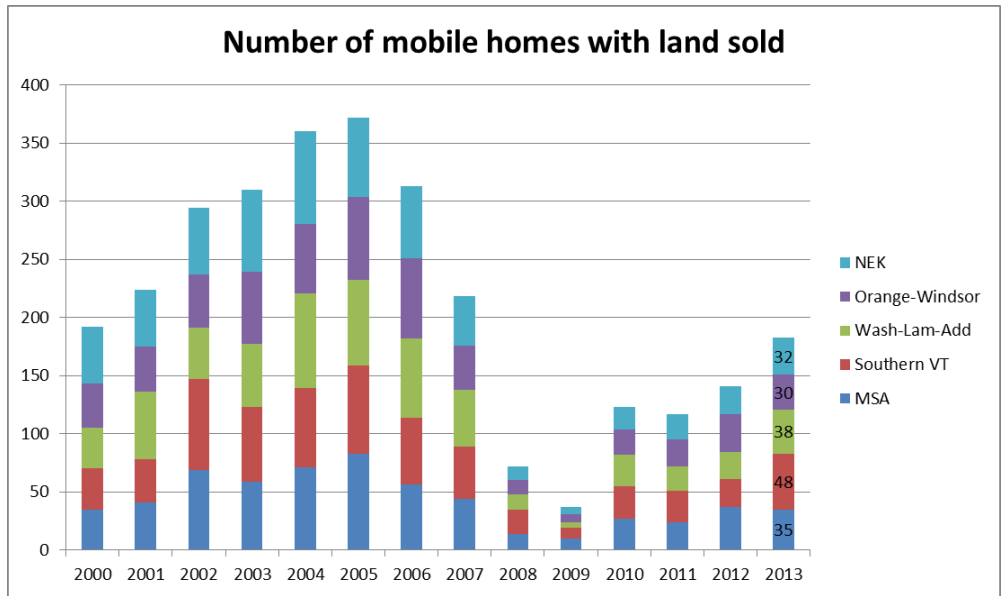


Data source: www.housingdata.org.

Mobile Home Sales with Land

Approximately 7 percent of Vermont’s homes are mobile homes, most of which are owner-occupied on land also owned by the homeowner. Sales of these homes fell even more dramatically than single-family houses during the recession, in part due to a sharp drop in the number of lenders willing to make any new mortgages for mobile homes.

Figure 9. Mobile Home Sales with Land - 2000 - 2013

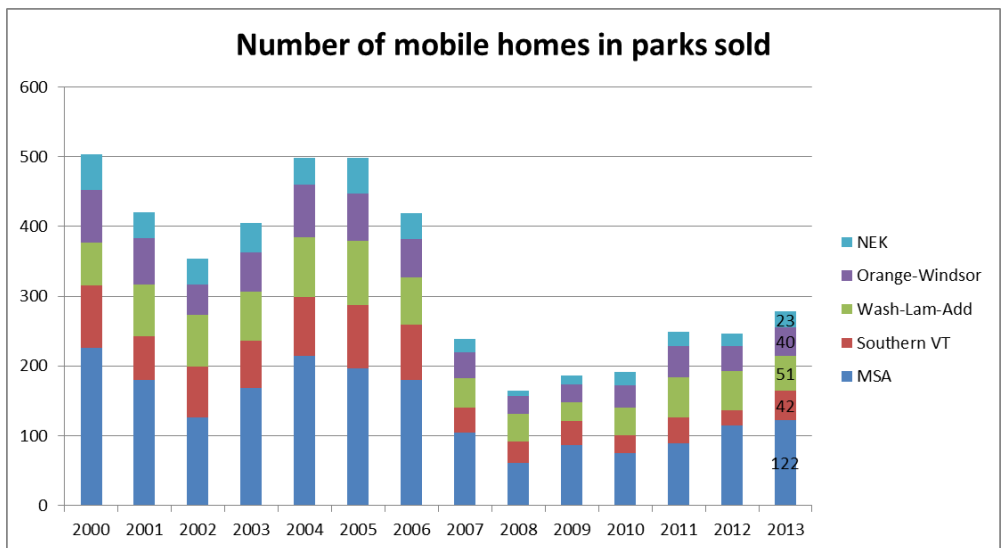


Data source: www.housingdata.org.

Mobile Homes in Parks Sales

Although less extreme than for mobile homes on owned land, the recession also took a toll on the number of mobile homes sold in mobile home parks. From a high of approximately 500 sales in both 2004 and 2005, sales numbers dropped to about 160 in 2008. With a relatively low median price of \$28,000, many sales of mobile homes in parks are cash transactions unaffected by the withdrawal of mortgage lenders from the mobile home purchase market.

Figure 10. Number of Mobile Homes in Parks Sold by Year - 2000 - 2013

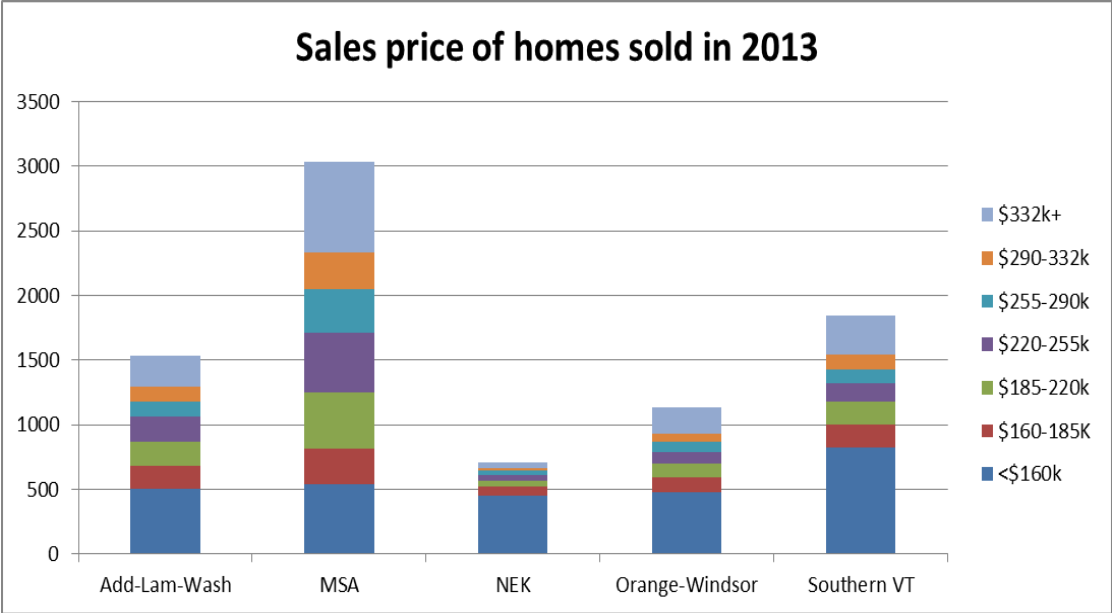


Data source: www.housingdata.org.

Home Sales by Price Range

The median price of homes sold in Vermont in 2013 was \$200,000, although there is significant variation between the price of homes in the MSA and those sold outside of the MSA. Within the MSA, the median price of homes sold in 2013 was \$238,000. The region with the lowest median home prices is the Northeast Kingdom region with a median sales price in 2013 of \$130,000.

Figure 11. Single Family Home Sales by Price Range in 2013 - <\$160k - \$332k+



Data source: VHFA analysis of home sales data from the Northern New England Real Estate Network.

Cost of Homes & Ability to Pay – On Purchased Land

Certain High Performance Homes are available as modular construction and may be purchased for a fixed price that depends on the model and features of the home. Buying a modular High Performance Home also requires paying for necessary site work and the installation of the home’s foundation. The cost of buying a lot for the home must be included in the total price tag of a high performance home, except for HP Mobile Homes placed in existing mobile home parks. As shown in Figure 12, the median price of lots sold in Vermont varies greatly by region. The median price of lots sold in the MSA in 2013 was \$119,000—even more than the price of the HP Mobile Home unit we studied.

The total price tag for buyers seeking to place a High Performance Mobile or Cottage Home on owned land priced at the regional median ranges from \$184,775 for a HP Mobile Home in the Northeast Kingdom to \$331,849 for a HP Cottage Home in the MSA. For the typical Vermont home buyer, a new High Performance Mobile or Cottage Home and lot would require annual household income ranging from \$55,219 for the HP Mobile Home in the Northeast Kingdom to \$98,552 for the HP Cottage Home in the MSA—well above the median income levels in these regions.

Figure 12. Cost of HP Cottage Home & HP Mobile Home on Purchased Land

High Performance Home on Purchased Land

	MSA	Southern VT	Wash-Lam-Add	Orange-Windsor	NEK	VT
Median lot cost	\$ 119,000	\$ 47,000	\$ 59,500	\$ 36,000	\$ 30,000	\$ 55,000
Site work and foundation	\$ 47,775					
HP Cottage Home cost	\$ 165,074					
HP Cottage Home Total Price	\$ 331,849	\$ 259,849	\$ 272,349	\$ 248,849	\$ 242,849	\$ 267,849
Income required to afford HP Cottage*	\$ 98,552	\$ 77,147	\$ 80,863	\$ 73,877	\$ 72,093	\$ 79,525
HP Mobile Home cost	\$ 107,000					
HP Mobile Home Total Price	\$ 273,775	\$ 201,775	\$ 214,275	\$ 190,775	\$ 184,775	\$ 209,775
Income required to afford HP Mobile*	\$ 81,309	\$ 60,106	\$ 63,834	\$ 56,824	\$ 55,219	\$ 62,641

Data source: VT Property Transfer Tax data on price of lots sold in Jan 2012-June 2014 and site improvement estimates and home pricing information provided by VEIC and Vermont Housing and Conservation Board.

For homes on purchased land, this assumes a 30-year fixed rate mortgage with 5% down payment and average Vermont insurance, taxes, closing costs and interest rates. Estimated income required to afford home is based on 30% housing cost-income affordability ratio.

Cost of Homes & Ability to Pay – On Rented Lot

The least costly high performance home option studied here is the HP Mobile Home placed in a typical Vermont mobile home park. The average monthly lot rent in Vermont’s mobile home parks is \$270 and the site work and foundation costs associated with mobile home parks are about half that of placing a home on a purchased lot since much of the site work has already been done and parks require less costly foundation work than the work that would occur for a home placed on land typically purchased by a home buyer.

The total price tag of buying and siting a HP Mobile Home in a mobile home park is approximately \$131,545. When the cost of monthly lot rent is included, the typical Vermont household that could afford to buy a HP Mobile Home placed in a park would need to have an annual income of \$55,000.

Figure 13. HP Mobile Home Costs in Mobile Home Park

HP Mobile Home in MH park	State-wide averages
Average monthly lot rent	\$ 270
Site work and foundation	\$ 24,275
Home cost	\$ 107,000
Total Price	\$ 131,545
Income required to afford home*	\$ 55,000

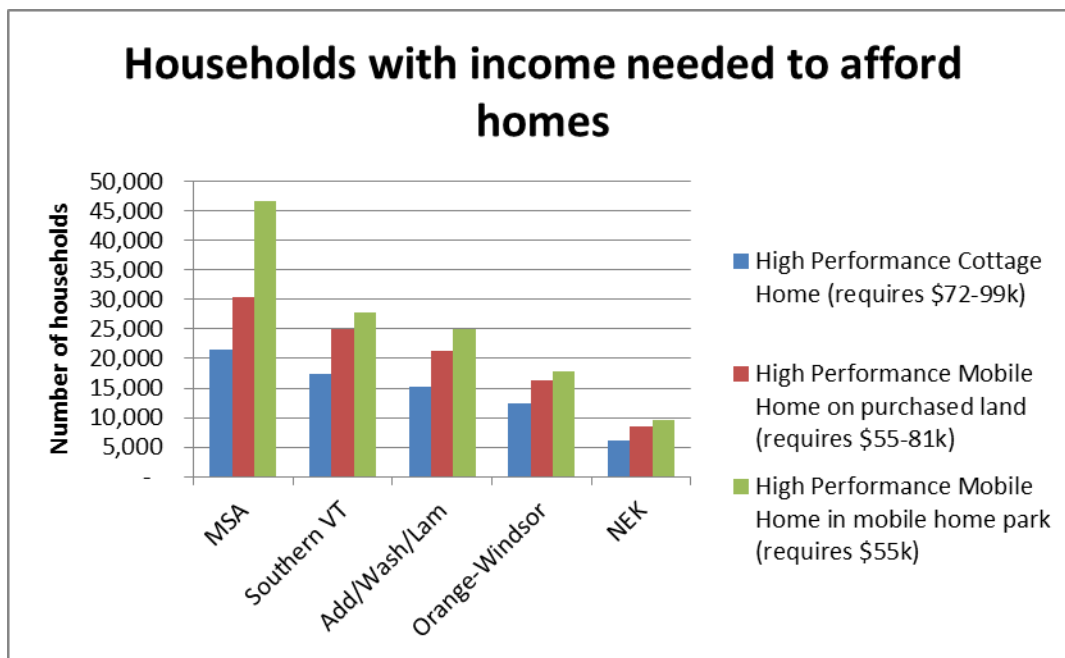
Data source: Average monthly lot rent in 2013 from the Vermont Department of Housing and Community Development and site improvement estimates and home pricing information provided by VEIC and Vermont Housing and Conservation Board.

For homes on a rented lot in a mobile home park, the income needed assumes average state-wide monthly lot rent in total annual housing costs. Estimated income required to afford a home is based on 30% housing cost-income affordability ratio. Assumes a 25-year fixed rate mortgage with a 5% down payment and 5.5% interest rate, with average VT insurance, taxes, and closing costs. Site work and foundation costs include an estimated \$7,500 for foundation work.

Households with Income Needed to Afford High Performance Homes

To estimate where buyers in the state can afford to buy high performance homes, we estimated the number of households in each region with incomes high enough to pay the total estimated price tag of the three homes. Despite the higher cost of land in the MSA, more households in the MSA have the incomes needed to afford the three types of high performance homes than any other region, as shown in Figure 14.

Figure 14. Number of Households with Income Needed to Afford High Performance Homes



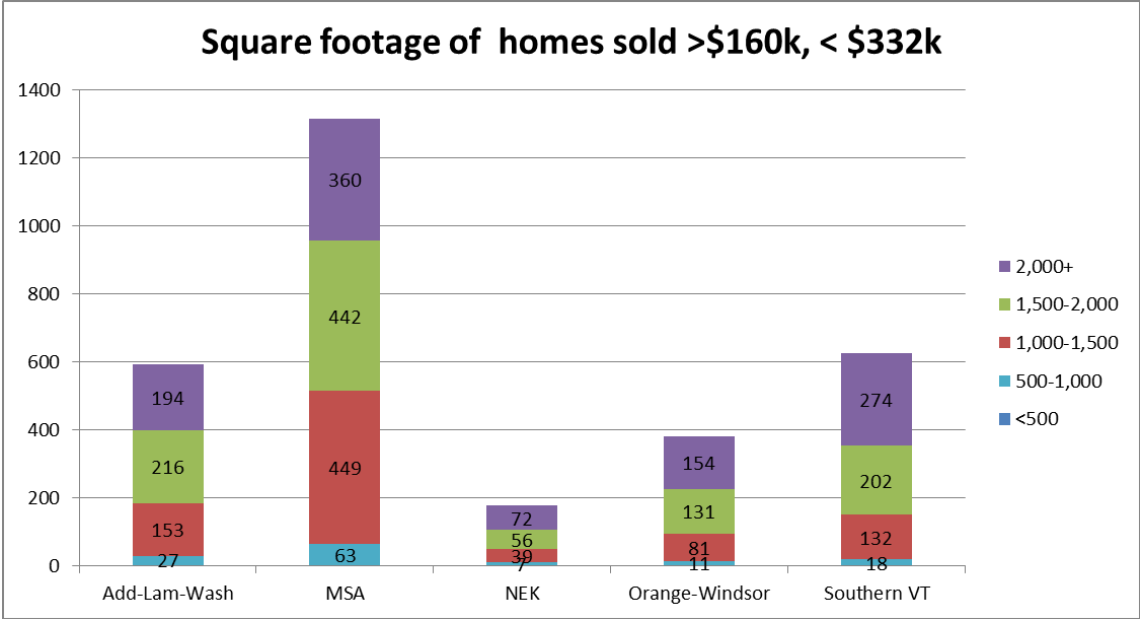
Data source: VT Property Transfer Tax data on price of lots sold in 2013, Average monthly lot rent in 2013 from the VT Department of Housing and Community Development, site improvement estimates and home pricing information provided by VEIC and Vermont Housing and Conservation Board and U.S. Census Bureau American Community Survey 2008-2012 estimates.

Note: For homes on purchased land, assumes a 30-year fixed rate mortgage with 5% down payment and average Vermont insurance, taxes, closing costs and interest rates. For homes on a rented lot in a mobile home park, assumes average monthly lot rent in total annual housing costs. Estimated income required to afford home is based on 30% housing cost-income affordability ratio.

Sold Homes Sizes in High Performance Homes Price Range

Most conventional homes sold in the high performance homes price range of \$160,000 to \$332,000 are larger than 1,500 square feet, with at least 3 bedrooms. The HP Mobile Home model we studied contains 980 square feet of living space and 2 bedrooms. This means that buyers with incomes high enough to afford the HP Mobile Home are also likely to be able to afford many larger, conventional homes for sale. The HP Cottage Home’s 1,320 square feet of living space and 3 bedrooms come closer to the size of the typical home sold, but is still substantially smaller than most homes.

Figure 15. Size of Homes Sold in High Performance Homes Price Range

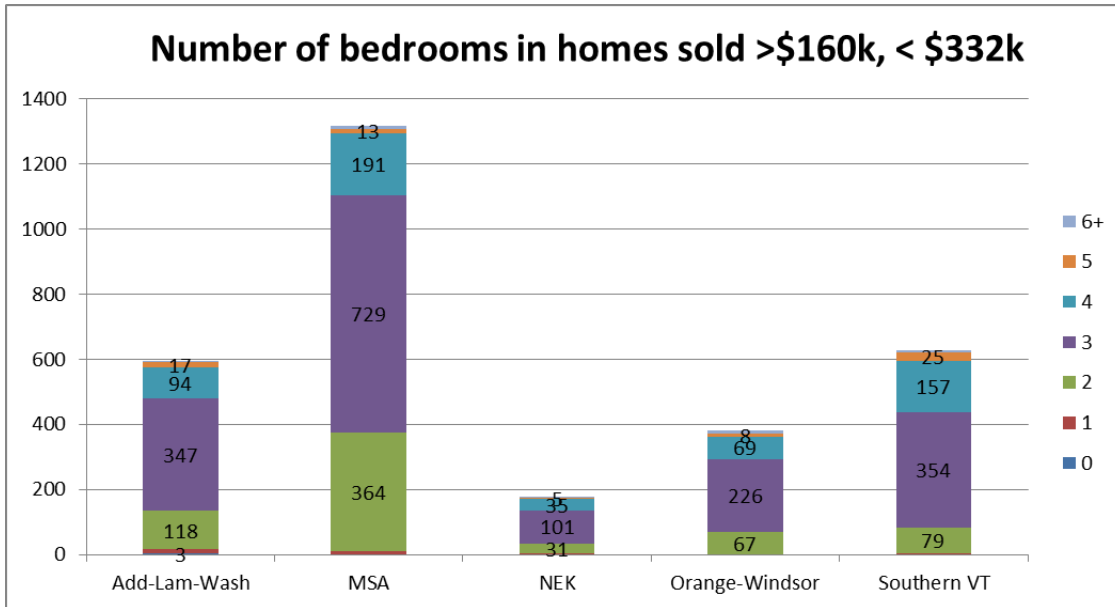


Data source: VHFA analysis of homes sales data from the Northern New England Real Estate Network.

Sold Homes Number of Bedrooms in Price Range

Most of the homes sold each year are resales of existing homes. When focusing exclusively on the sales of new homes, the price of the high performance homes becomes much more competitive, especially for the larger HP Cottage Home, in regions outside of the MSA. The median price of new homes sold in Vermont in 2011-2013 was \$300,000 and the median square footage of these homes was 1,856--nearly 500 square feet larger than the HP Cottage Home and almost twice the size of the HP Mobile Home, as shown in Figure 16.

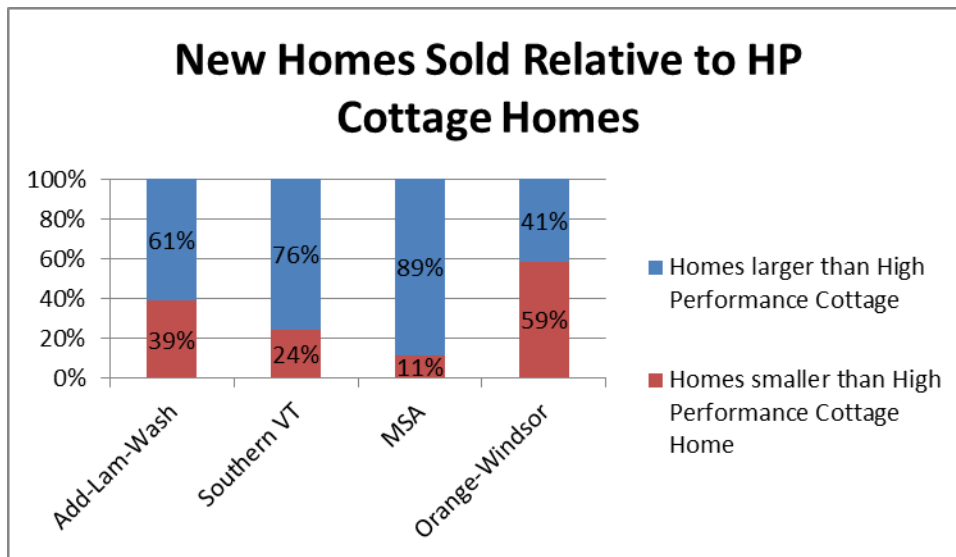
Figure 16. Number of Bedrooms in Homes Sold within High Performance Homes Price Range



Data source: VHFA analysis of homes sales data from the Northern New England Real Estate Network.

Figure 17 shows that the vast majority (89%) of all new homes sold in the MSA are larger than the HP Cottage Home Cottage, unlike the other regions of the state which included more modest-sized homes.

Figure 17. New Homes Sold Relative to High Performance Cottage Homes

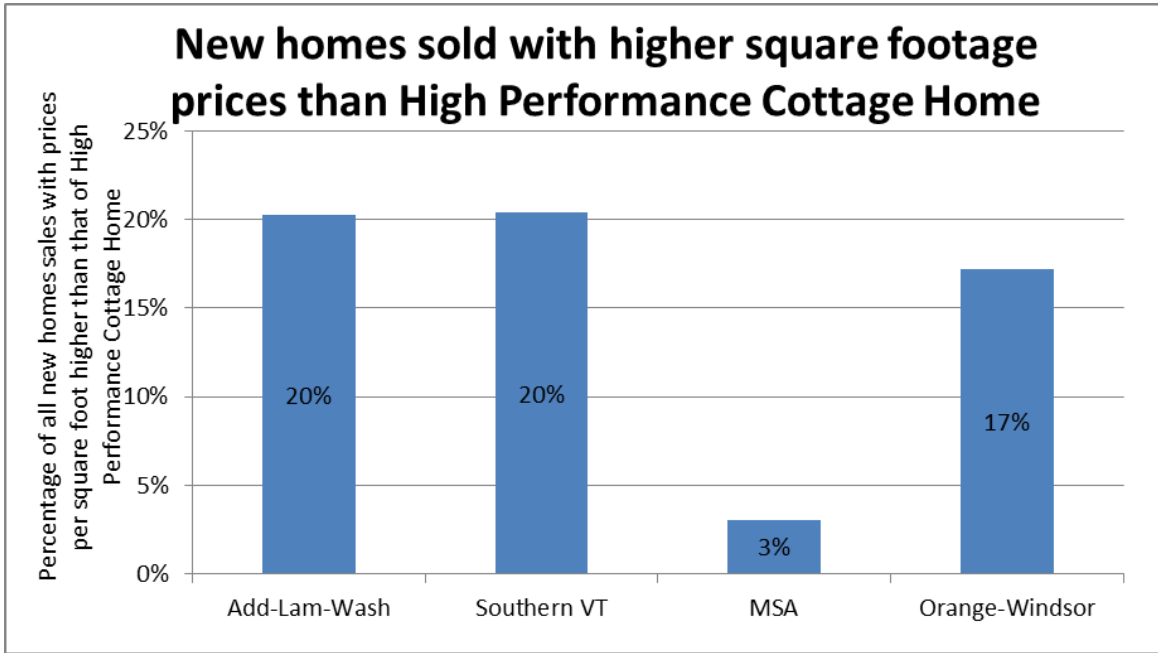


Data source: VHFA analysis of 2011-2013 homes sales data from the Northern New England Real Estate Network.

Factoring both the cost and size of the new homes sold in each region in 2011 through 2013 indicates that the areas outside the MSA are most ripe for potential buyers also considering conventional homes.

Roughly 17% to 20% of the new homes sold in regions outside of the MSA had higher prices per square foot than the HP Cottage Home.

Figure 18. New Homes Sold with Higher Square Footage Prices than the High Performance Cottage Home

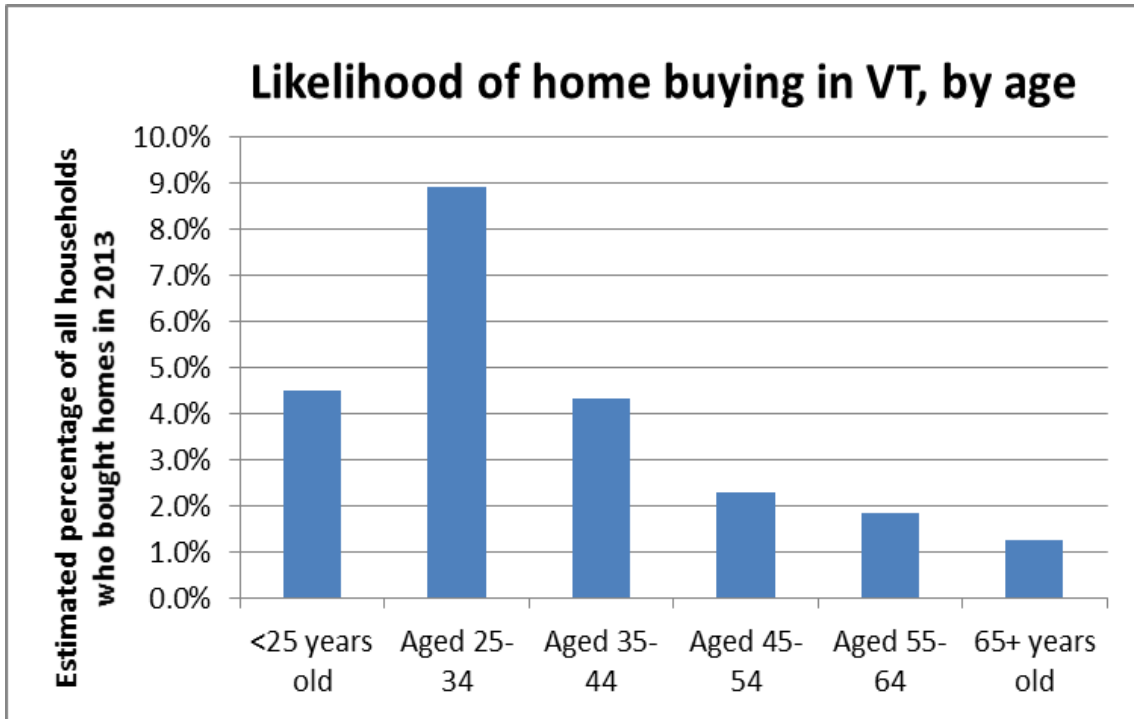


Data source: VHFA analysis of 2011-2013 homes sales data from the Northern New England Real Estate Network.

Mobility: Likelihood of Purchase by Age

Vermonters aged 25-34 are at least twice as likely as any other age group to buy homes, according to our analysis of Census estimates and information from the National Association of Home Builders. An estimated 9% of all households headed by someone aged 25-34 buy homes in Vermont each year. For older households, the likelihood of home buying declines with age. Only about 1% of all households headed by someone at least 65 years old are likely to buy a Vermont home each year. Even when looking exclusively at new homes, people aged 25-34 are more likely than any other age group to buy, according to the National Association of Home Builders.

Figure 19. Likelihood of Home Buying by Age Bin

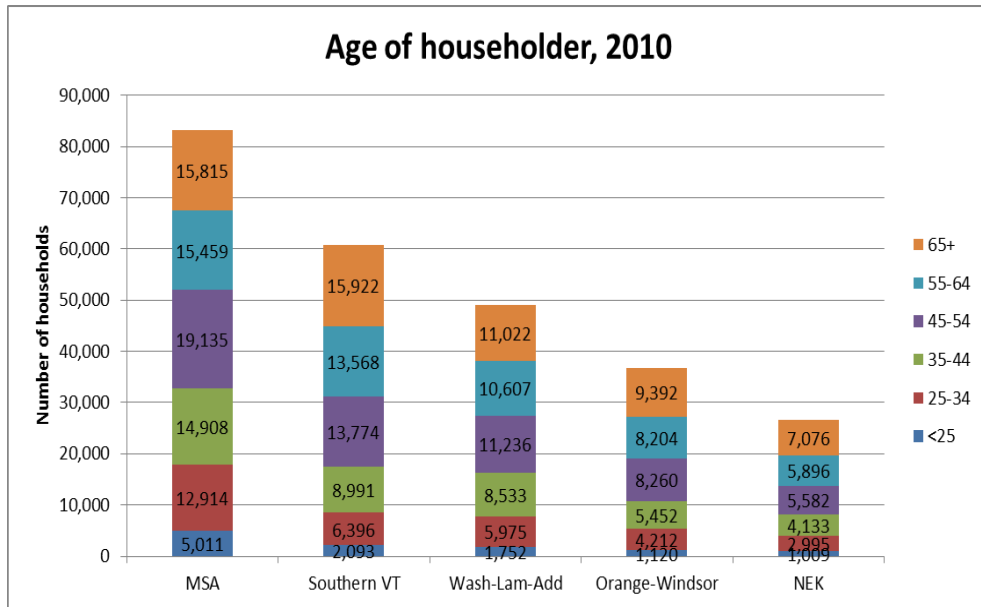


Data sources: U.S. Census 2010, American Community Survey 2008-2012 and National Association of Home Builders.

Mobility: Age of Household

Although older residents comprise the fastest growing segment of the population, the high mobility rate of younger households, aged 25-34, means that more potential home buyers are likely to live in the regions with the youngest households: the MSA, Southern Vermont and Washington-Lamoille-Addison regions.

Figure 20. Age of Householder in 2010

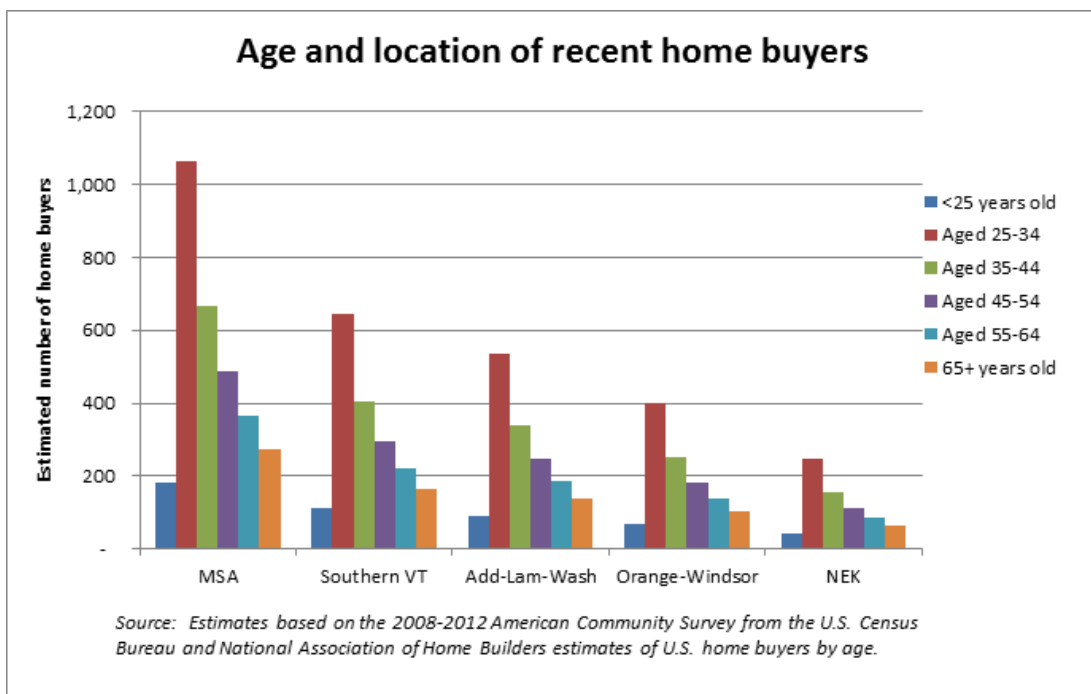


Data source: U.S. Census 2010.

Age and Location of Recent Home Buyers

Figure 21 shows the high mobility rates of younger Vermonters, clearly indicating that they are the largest component of recent home buyers in each region.

Figure 21. Age and Location of Recent Home Buyers

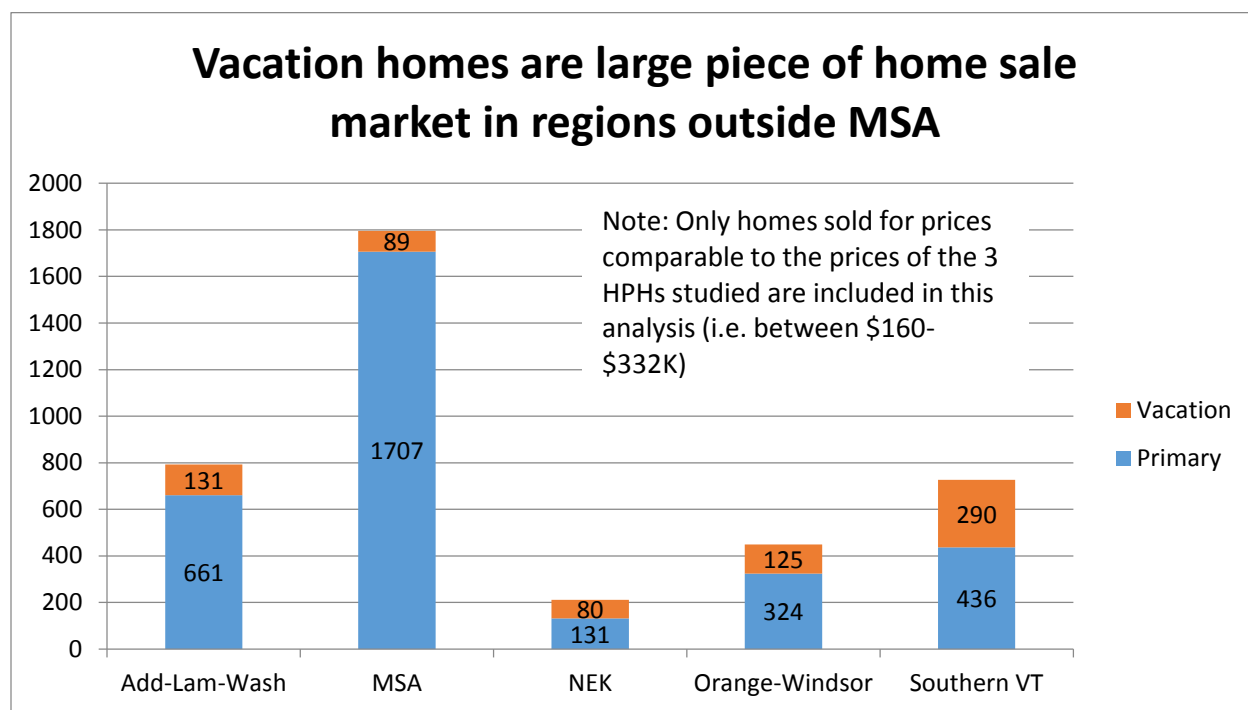


Seasonal vs. Year-Round

Approximately 16 percent of the homes in Vermont are vacation homes, according to 2010 Census counts. Certain parts of the state, such as the southern Vermont counties of Bennington, Rutland and Windham are especially desirable as vacation destinations, where 40 percent of all homes sold in 2013 were for intended for vacation use.

While the incomes of seasonal home buyers tend to be higher than average, these buyers will be comparing high performance home options with existing homes on the market, often in very specific target locations such as ski resort areas. Mobile home dealers reported that there is a very small seasonal market for the HP Mobile Home, namely older, out-of-state buyers who want a home in Vermont with low taxes to come to in the summer.

Figure 22. Vacation Homes



Data source: VT Property Transfer Tax data.

Opportunities, Barriers and Mitigators for Market Segments

Region	Household Income*	Number of households	HPH Affordable**	Greatest barrier to purchasing this HPH	Potential mitigator
All	<\$55k	129,999	None	Income not likely to be sufficient to afford any of the 3 homes	Subsidy to reduce purchase price (\$50,000)
MSA	\$55-81k	46,538	HP Mobile Home in park (\$131,000)	<ul style="list-style-type: none"> Neighboring homes in very close proximity may be deteriorating. Removing existing structure for replacement homes adds to total cost. Households at upper end of this segment have incomes far above the median among existing park residents (\$30,000) 	<ul style="list-style-type: none"> Replace all homes or develop new park. Subsidy for removal of existing homes
	\$81-99k	30,297	HP Mobile Home on purchased lot (\$274,000)	Price and size of HPH are less advantageous than the many other homes for sale that this segment can afford. Many larger, existing houses and new condo units sold each year in the MSA are affordable to this income group.	Development of very dense neighborhoods to reduce land costs.
	\$99k+	21,451	HP Cottage Home (\$332,000)	Price and size of HPH are less advantageous than the many other homes for sale that this segment can afford. New home sizes average much larger HPH.	Development of very dense neighborhoods to reduce land costs.
Southern VT	\$55-60k	27,684	HP Mobile Home in park (\$131,000)	<ul style="list-style-type: none"> Neighboring homes in very close proximity may be deteriorating. Removing existing structure for replacement homes adds to total cost. 	<ul style="list-style-type: none"> Replace all homes or develop new park. Subsidy for removal of existing homes
	\$60-77k	25,034	HP Mobile Home on purchased lot (\$202,000)	Price and size of HPH are less advantageous than the many other options this segment can afford. Many larger, existing houses sold each year in the region are affordable to this income group.	Development of very dense neighborhoods to reduce land costs.
	\$77k+	17,410	HP Cottage Home (\$260,000)	This is a potential market given prices and sizes of new homes sold here. The median price of a new home here is within \$10,000 of the HP Cottage Home and, homes with comparable prices to HP Cottage Home are about the same size. Information and uncertainty about the unknown are biggest barriers.	Coaching, outreach, favorable and streamlined mortgage/appraisal process

Wash-Lam-Add	\$55-64k	25,080	HP Mobile Home in park (\$131,000)	<ul style="list-style-type: none"> • Neighboring homes in very close proximity may be deteriorating. • Removing existing structure for replacement homes adds to total cost. 	<ul style="list-style-type: none"> • Replace all homes or develop new park. • Subsidy for removal of existing homes
	\$64k-81k	21,374	HP Mobile Home on purchased lot (\$214,000)	Price and size of HPH are less advantageous than the many other options this segment can afford. Many larger, existing houses sold each year are affordable to this segment.	Development of very dense neighborhoods to reduce land costs.
	\$81k+	15,205	HP Cottage Home (\$272,000)	This is a potential market given prices and sizes of new homes sold here. The average price of a new home here is \$288,000. Homes with comparable prices to HP Cottage Home have comparable sizes. Information and uncertainty about the unknown are biggest barriers.	Coaching, outreach, favorable mortgage/appraisal process
Orange-Windsor	\$55-57k	17,834	HP Mobile Home in park (\$131,000)	<ul style="list-style-type: none"> • Neighboring homes in very close proximity may be deteriorating. • Removing existing structure for replacement homes adds to total cost. 	<ul style="list-style-type: none"> • Replace all homes or develop new park. • Subsidy for removal of existing homes
	\$57-74k	16,310	HP Mobile Home on purchased lot (\$191,000)	Price and size of HPH are less advantageous than the many other options this segment can afford. Many larger, existing houses sold each year are affordable to this segment.	Development of very dense neighborhoods to reduce land costs.
	\$74k+	12,405	HP Cottage Home (\$249,000)	This is a potential market given prices and sizes of new homes sold here. The average price of a new home here is \$412k and homes priced like the HP Cottage Home are even smaller.	Coaching, outreach, favorable mortgage/appraisal process
NEK	\$55k	9,696	HP Mobile Home in park (\$131,000)	<ul style="list-style-type: none"> • Neighboring homes in very close proximity may be deteriorating. • Removing existing structure for replacement homes adds to total cost. 	<ul style="list-style-type: none"> • Complete replacement of all homes or development of new parks. • Subsidy for removal of existing homes
	\$55-72k	8,532	HP Mobile Home on purchased lot (\$185,000)	The relatively low price of land brings the price of HPH down to an attractive level. But with very few new homes sold here, the availability of developable lots is uncertain.	Identify the presence of developable lots.
	\$72k+	6,191	HP Cottage Home (\$243,000)	The relatively low price of land brings the price of HPH down to an attractive level. But with very few new homes are sold here, the availability of developable lots is uncertain.	Identify the presence of developable lots.

**Income groups are based on the estimated income needed to afford to buy one of the three types of high performance home, assuming a traditional 30% affordability ratio. This means we've assumed a household can afford to spend up to 30% of its income for mortgage, rent, taxes and insurance. **This column lists only the most costly of the three HPH opportunities affordable to each market segment, although any less costly opportunities are also affordable to these segments.*

Mobile Home Dealer Interviews

To examine the market for the HP Mobile Home among buyers of Vermont mobile homes, we interviewed four of Vermont’s ten prominent mobile home dealers: Fecteau Homes (Montpelier), Moore’s Manufactured Modular Homes (Rutland), Village Homes/Ran Mar Construction (Berlin) and Beans (Lyndonville).

Each dealer stated that the current mobile home buyer market would find a price tag of \$100,000 to be too expensive when compared to other options available. The dealers did not believe that the additional energy savings of a net-zero home when compared to their standard home would justify the higher initial purchase price of the net-zero home¹². The most expensive double-wide mobile home currently available costs less than \$100,000. Among all homes sold by these dealers, 80% to 95% are new (rather than existing homes being re-sold). The dealers explained that mobile home sales are predominately for homes that will be going on owned lots and that most sales are double-wide mobile homes.

Figure 23. The Typical Double-Wide Mobile Home, Post-Delivery and Pre-Installation in Starksboro, VT



Dealers noted that single-wide mobile homes sales are predominately to buyers in mobile home parks because parks can only accommodate the footprint of a single-wide home or to buyers who are downsizing. Compared to the other two dealers, more of the Fecteau Homes sold in a typical year are single-wide homes for mobile home parks.

The dealers claim that the majority of new mobile homes sold are “5 Star Energy Rated”, which the dealers stressed as a very important feature. They explained that mobile home financing programs often require that new homes be “5 Star Energy Rated”. However, Efficiency Vermont has not been issuing “5 Star Energy Ratings” for about a decade, so apparently the dealers are operating under old information. But the fact that they acknowledge the importance of energy efficiency to their buyers and lenders, regardless of how it is defined, is important to note.

Most mobile homes sold by the interviewed dealers are financed, although sales to buyers who are down-sizing are often cash sales. The dealers noted that appraisals make the financing process difficult. It appears that the typical mobile home is financed, and those who use financing take out the maximum mortgage amount allowable, for the most part.

¹² Note that the HP Mobile Homes that sell for \$107,000 would still have an energy bill. The cost of the HP Mobile Home with a complete photovoltaic package that would reduce the annual energy bill to close to zero is \$121,000.

Market Analysis Conclusions

Based on the data and analysis from the market demographics research, we draw the following conclusions:

- There is a very small existing market for single-wide mobile homes of any kind in Vermont, but for HP Mobile Homes, there is virtually no “market”¹³ without some sort of subsidy.
- HP Cottage Homes (and potentially site-built HPHs) represent a tiny sliver of the potential for the new homes market. There may be some opportunities in certain markets in the state, but there are significant cost hurdles to overcome.
- People expect more in terms of conventional features at the price point of these HP Homes (size, bedrooms, etc.).
- It is going to be very challenging to create new markets and build demand for HPHs.

¹³ For the purposes of this study, we define “market” as: a large enough group of potential buyers with common characteristics and interests to warrant shaping outreach and marketing to respond to their particular wants and needs.

Understanding the Consumer Target for High Performance Homes in Vermont - Qualitative Research: Report of Findings

Overview

Background

- Efficiency Vermont, who is a member of the High Performance Home Working Group, commissioned Fifth Element Associates to conduct qualitative research that digs deeper into understanding the kinds of Vermonters who are most likely to find High Performance Homes appealing and provide greater insight into what will motivate purchase of such homes.
- These findings supplement an in-depth market analysis on High Performance Homes. Together, the projects were designed to better understand market potential, consumer targets, and how best to activate the High Performance Home sector. Both the market analysis and qualitative research will be used to:
 - Inform Efficiency Vermont’s marketing plans and structuring incentives;
 - Guide subsidy decisions by statewide housing partners;
 - Guide sales plans and pricing strategies of dealers and builders;
 - Inform the development of specific financing tools by High Meadows Fund and other partners.

Research Objectives

- The specific objectives for the qualitative research study include: 1) define demographically and psychographically the “early adopter” target consumer for high performance homes; 2) determine how best to reach and communicate with this target consumer (identifying the benefits and messages that will resonate and effective marketing and outreach efforts); 3) identify the motivators and barriers to adopting High Performance Homes; and 4) determine the types of financing structures/tools that will help increase adoption.
- This research is qualitative in nature, intentionally designed to hear the voices, viewpoints, and experiences of a small number of participants. This approach allowed for time to be spent digging deeper into understanding core values, needs, and concerns, as well as more subtle cultural, social, and emotional contexts that shape the attitudes and behaviors of Vermonters who participated in this study.

Methodology and Sample

- Claudia Eisinger, Principal Researcher of Fifth Element Associates, convened three mini insight focus groups and a series in-person and telephone interviews with a variety of potential consumer types. In total, 36 participants, evenly mixed between males and females, participated in this research between August 26 and September 10, 2014. All received honorariums for participating (\$30/interview and \$75/mini group). Participants were categorized as follows:

Who	Method/# of Participants	Participant Demographic
Segment 1: Early Adopters	One in-person mini group and five telephone interviews 10 participants in total	*All to be currently living or actively building a High Performance Home (HPH) and hold a mortgage *Mini group (5 participants): homeowners currently living in the Steve Davis Charlotte development *Interviews: two HPH owners currently living in in the Williams Hill Charlotte development; three HPH owners (Jeffersonville, Waitsfield, West Burke) who are not part of a development (two recently built/one actively building) *Income: \$45K to over \$85K; ages: 25 to 64 years (age ranges skewed younger); five males/five females *Recruitment: purchased research list (FEA) and EVT outreach
Segment 2: Seeking Affordable Housing	One-on-one telephone interviews 5 participants in total	*Currently renters or those who have recently purchased their home (within the last six months) *All seeking to purchase an affordable/energy-efficient home (free standing or mobile home) with in next two years *All to have annual HHI that is 80%-120% of medium income (based on HHI and number of people living at home); ranged from \$49k to \$96K with 2 to 4 occupants per household *Areas represented: Middlesex, St. Johnsbury, Northfield, St. Albans, Richmond *Ages: four aged 24 to 44 years and one aged 45 to 64; three females and two males *Recruitment: purchased research list (FEA) and EVT outreach including Front Porch Forums
Segment 3: Owners of Mobile Homes in Mobile Home Parks	Two in-person mini groups* 9 participants in total	*A mixture of those who rent/rent-to-own or own a mobile home unit at least 15 years old and/or “high energy users” *All open to the idea of a more cost-effective mobile home and to having a mortgage *Areas represented: Colchester and Vergennes/St. George; five females and four males *Recruitment: outreach initially by EVT; then additional outreach efforts and purchased research lists (FEA); proved most challenging for this target; no income or age quotas
Segment 4: Senior Residents Looking to Downsize	One-on-one telephone interviews 6 participants in total	*All current homeowners who are looking to downsize near town/village center *Age 65 and older (ranged from 67 to 81 years); five males and one female *Areas represented: Brandon, Thetford, Vergennes, Colchester, Newfane, Bristol *Recruitment: purchased research lists (FEA); no income or gender quotas
Segment 5: Non-Mobile Home Park Rural Residents	One-on-one in-person interviews 6 participants in total	*All own a mobile home unit at least 15 years old and/or “high energy users” *Open to having a mortgage *Living in a mix of settings (rural or close to town/village center); areas represented: Middlesex, Stafford, Quechee, Bristol, Fairfax *No age or income quotas (skewed older 72 to 92 years plus one aged 25 years); four females and two males *Recruitment: purchased research lists (FEA) and additional weatherization list provided by EVT; recruitment proved difficult until resorting to weatherization list

Additional Quotas

- All were the primary or joint decision maker when it comes to home buying;
 - All paid their own energy bills (electric/gas, etc.) – aware of cost and impact;
 - Different living styles to be represented: urban/rural across the research.
- Recruitment was a collaborative effort between Efficiency Vermont and Fifth Element Associates. Efficiency Vermont provided manager/owner contacts at mobile home parks for Segment 3 (Owners of mobile homes who live in a mobile home park), and conducted outreach for Segments 1 (Early adopters of High Performance Homes) and 2 (Consumers seeking affordable housing). A recruitment research company, based in Colorado, recruited participants for Fifth Element Associates. Claudia Eisinger closely managed the recruitment process. Claudia developed, in collaboration with the client team, different recruitment screeners (short questionnaires used to ensure participants met certain quota requirements and included a variety of backgrounds and situations) tailored to each segment.
 - Recruitment proved most difficult in identifying participants for the mini groups of mobile homeowners who live in mobile home parks. Many were not interested, or if they were, often had crises that would result in them not following up, canceling, or not showing. We had to over-recruit above what is typical. A variety of recruitment methods were used, but most effective was to identify one or two participants and have them invite others (friends and family) they knew to be screened to attend. Thus, we relaxed the recruitment quotas here as they were no longer a random selection of participants for these groups. It was also very difficult to identify those in mobile homes in more rural settings. Identifying participants was more successful when we resorted to using a weatherization list provided by Efficiency Vermont.

- Also, it is important to note that participants in the Early Adopters mini group in Segment 1 were all from the Steven Davis Charlotte development. These homeowners had worked with Champlain Housing Trust, where they became aware of, identified, and purchased their current high performance homes. They had a fixed amount that they had to spend on their home and a limited selection of homes from which to choose. Additionally, they had completed a mortgage education program and all had received grants that lowered their mortgage amounts.

Context

Core Values

- It is helpful to understand that our participants shared common characteristics and values:
 - Simplicity: focus on what really matters, not into too many frills, not boastful;
 - Balance: clearly have goals and dreams, but seek a life where work, family, and play are in balance;
 - Good- /generous-hearted: value family and friends, being in healthy environments to raise children, are involved in their communities; value being with those whom they can trust and rely on;
 - Independence: want the freedom to live how they choose and allow others to do the same;
 - Slower pace: enjoy Vermont and its many qualities (the outdoors and being clean, safe, natural, peaceful)
 - Common sense: take a practical, realistic, and responsible approach to life;
 - Economical: don't spend beyond their means, are thrifty, and more apt to save money if they can;
 - Quality: appreciate beauty and when things are made well.
- It is important to note that low-income participants tend to have more chaotic lives, when compared to those at higher income levels:
 - They are often derailed by the unexpected (health, work, family issues), feel restricted by their circumstances, and struggle to make ends meet. If something goes awry, they do not necessarily have good contingency plans. Also, issues of feeling controlled by authorities (especially by a landlord) come up.
 - Furthermore, low-income Vermonters tend to be more risk adverse and often feel let down by others. Thus, they only trust a few people and real experiences rather than "just the talk."
 - The findings among low-income Vermonters in this research reinforce the insights we gained from a more in-depth study specifically focused on this group. (Please reference: Understanding Low-Income Vermonters: Qualitative research Findings, September 4, 2014 ©2014 FEA.)

Homeownership

- On the one hand, there is a shared sense of pride in the idea or reality of owning one's home:
 - All participants, at some point, have dreamed of owning their own home with many researching and gathering ideas of their ideal home often over a number of years (e.g., saving newspaper articles, creating a scrapbook, considering different home designs, materials, and systems).
 - Homeownership is linked with responsibility, value, and freedom:
 - One is more likely to take care of it when it is one's own.
 - One can build equity (versus renting).
 - They expect it to appreciate in value over time and can pass it on to future generations.
 - One can feel a great sense of autonomy over one's environment and are free to be and express oneself creatively.
- On the other hand, the thought of and eventual steps of owning a home generate deep fears of unknowns. Often the deciding factor between those who choose to own their home and those who do not has to do with one's ability to handle a certain level of uncertainty and also the ability to address many of the unknowns:
 - For renters/first time buyers, owning a home is a big leap, especially for Vermonters with low incomes who tend to have more chaotic lives:
 - Linked with greater sense of responsibility and the need for stability which can be challenging;
 - Fear the unexpected (job loss, health issues, etc.) that could lead to getting behind on mortgage payments and losing one's home;
 - Don't believe it is possible (don't have the money or don't believe they qualify for a mortgage based upon credit rating/score);
 - Worry they can't afford it long term, especially unexpected costs (maintenance, fixing, fluctuating energy bills), especially ones that landlords tend to shoulder.
 - For others, building one's home can cause a certain level of stress, anxiety, and at times, overwhelm:
 - Higher costs: budget overruns, contractors making mistakes that lead to higher spending; getting mortgage approval;
 - Question and decision fatigue: entering realm where one doesn't know what they don't know.
- One's life stage tends to determine if a home is considered forever or just a stepping stone:
 - Those who are younger seek homeownership that is aligned with the fact that they are starting out and life circumstances will change (e.g., income earning potential will likely grow, plan to have children), and then they will need more room.

- The tendency is to move to a more settled and predictable way of life as one ages, and the idea of changing homes becomes less appealing. A number of participants seem to hit a point in their lives, often pre-retirement, where they decided their home is forever.
- The meaning of being comfortable in one's home evokes strong emotional cues and specific physical benefits:
 - Stability and safety: predictable bills, affordable/stays within budget, and a good place to raise a family;
 - Familiarity: coziness – gatherings of family and friends; memories, “my home/things are as I like them”;
 - Consistency: physically means enjoying even temperatures (not cold in the winter or hot in the summer);
 - Surroundings: the environment around the home is taken into consideration (good neighbors/community; natural beauty of the land, space for privacy, the way one's home is set on the land is aesthetically pleasing).

High Performance Homes

Barriers

- It is important to note upfront that a multitude of barriers need to be overcome in order for consumers to consider and buy a High Performance Home.
 - For potential consumers in all segments, key barriers include:
 - Lack of awareness that High Performances Homes exist and are available in Vermont;
 - Perceived price of a High Performance home versus a traditional home of a similar size and type;
 - Have a hard time visualizing how a smaller home with higher energy efficiency would really work and if there would be unintended drawbacks (extra noise of the system, darker due to smaller windows or heat loss from widows (especially if larger), have enough space and storage, fear that such homes would be too tight and stuffy, etc.);
 - Reluctance to take on a mortgage or go into debt or leave family with debt (e.g., retired who are living on a fixed income; seniors/low income who are worried if they die);
 - Do not trust that energy savings will be as high as stated;
 - Worry they will not find reliable experts (architects, contractors, appraisers, lenders, real estate agents, etc.) who have in-depth knowledge of this specific industry and who are willing and able help them with all the unknowns that are connected the building and buying process;
 - Might be put off or overwhelmed by the sophistication of the technology and the need to understand and operate it differently from what they know.
 - For potential consumers with low to moderate incomes, there are additional barriers:

- Trusting the quality and durability of the construction will last as long as it (have often had negative experiences with mobile homes);
- Qualifying for financial assistance/a mortgage;
- Fear the responsibility and stability required to take on a regular house payment/mortgage even if one qualifies (especially among renters/first time buyers);
- Fear living beyond their means and losing their home;
- Not understanding the true cost/savings involved (i.e., need to know total cost of ownership not just house payments and energy savings);
- For many young people, there is a stigma associated with living in/owning a “trailer.”

Response to High Performance Home Concepts

- Nearly all participants in this study either directly experience their High Performance Home or responded to one of the concepts (mobile home or cottage style home) positively and enthusiastically.
 - When shown the concepts, participants initially like what they see from the pictures and react favorably to the wording and benefits described. **That said, the High Performance Homes concepts were shown without revealing price.**
 - The concepts pique their curiosity. Some who are most enthusiastic start to imagine what it would be like to live there, and a few actually picture themselves in such a home as if were theirs.
 - Different terms and concepts are emphasized first by different participants, but all seem to resonate well, especially, “building it right the first time,” quality that lasts.” More specific benefits (e.g., “thick walls, ceilings, and floors,” “properly insulated,” “fresh air,” reduced maintenance,” and “protect you from high electric and fuel bills,” etc.) begin to build the case for seriously considering such a home option. For those at higher income levels, more environmentally conscious, and who are more interested in the technology, “energy efficient systems and building materials” catches their attention.
 - Increased interest comes in the form of many more questions about the specifics:
 - Do such home already exist? Where can I see one?
 - How do I qualify to afford such a place (especially low-income Vermonters)?
 - What really are the energy savings?
 - What kind of materials and systems are we talking about (especially males and higher income Vermonters)?
 - **Yet as they explored the details, they began to ask more individualized questions the literature didn’t address, and as a result they become increasingly skeptical.** It is clear that potential consumers want to better understand the required expenditures, savings, comfort, and (for higher income/more energy-conscious consumers) energy efficiency enhancements that High Performance Homes are claiming they have.
 - Those (adopters) who currently live in High Performance Homes, either as part of a development or as independently built, describe the experience as **better than**

imagined. Every day they are reminded that they have actively chosen to live in a way that is more cost effective, without compromising on quality, and that supports a more integrated, environmentally-conscious lifestyle and impact:

- Higher than expected cost savings on their energy bills (e.g., from \$3,500 and burning 3.5 cords of wood to \$350 and burning one cord; from \$135/month (apartment) to \$45/month (house), etc.);
- Enhanced living experience: quality and freshness of the air (feels healthy), consistent temperatures (no drafts), sense of how quiet and peaceful it is (thick walls) and surprising sense of space (enough for privacy and guests); regularly using all areas of the home;
- Enhanced sense of pride and recognition from family and friends for their home/lifestyle choices.

Motivational Factors

- It is a combination of benefits, addressing the barriers, and understanding how they work for one's own personal situation that is most likely to motivate further interest and eventual purchase of a High Performance Home. Beneficial factors include the following:
 - **The economics have to make sense and work, especially in terms of energy savings** (see **Response to Cost Savings Financing** section). Then, one can start to believe it is affordable and possible for them.
 - **Too good to be true**. Participants worry that that expected energy savings might be inflated and unattainable. This would leave them in a poor financial situation where the total cost of ownership exceeded their means. This point was acute with low income and first time buyers/renters. Those at low incomes, who have very little or no financial buffer for the unexpected, seek reassurance that there will be a safety net in place if they come on hard times and miss a payment, so they do not lose their home.
 - **Aesthetics play an important role in drawing interest and act as an important reassurance about the quality of living**: comfort/pleasure, ease of maintaining and cleaning, etc.
 - Being able to modify (number of bedrooms, being wheelchair accessible,) and personalize such homes;
 - Note: expressed interest (one participant) in having the option to expand the living area in the mobile home (like in camper units) for large gatherings such are around specific holidays;
 - Consider the location of the home and provide cues that help potential consumers visualize living in such a context (e.g., include landscaping, larger views of developments, etc.).
 - **Energy efficiency and environmental impact is a factor for all participants**. The degree to which it plays a role depends on how pronounced one's awareness is and how that has translated into behaviors:
 - Early adopters at the higher income levels spoke more readily about lifestyle choices they are making to reduce their footprint/be more sustainable or

environmentally conscious. Thus, both energy efficiency and environmental impact rank quite high as motivating factors. They tend to regularly use such terms as “energy efficiency” as they speak about the benefits of their home.

- For the early adopters at lower income, ***being affordable ranked far more important***. In general, they are more pragmatic and short-term focused. For example, mobile home users living in mobile parks are more strongly attracted to benefits like improved sound proofing, and sturdy construction, before considering savings on energy bills. Knowing that they are using less energy and their home is more environmentally sustainable is beneficial, but it may not be a motivator all by itself. For these consumers, it is nice but not something they can pay extra for.
- **Understanding the technology/systems and quality of materials provide important reassurance about the energy efficiency benefit.**
 - For those who are not technologically savvy, they seek trusted experts who can explain the technology/systems in ways that are easy to grasp. The ideal is a trusted expert who provides the big picture and how the systems fit into achieving quality, comfort, and energy savings, and are able to gauge the level of detail one requires or one can tolerate (without being overwhelmed).
- **It is important to make the experience of what living in a High Performance Home real.** Ideally, participants want to be able to walk through a real home and talk to those with experience living in a High Performance Home to get an honest account of what is like:
 - Sense the quality of the air (fear that tight house can feel stale or too claustrophobic);
 - See and touch the walls to understand how quiet it really is and if the house won't be drafty;
 - Understand the sense of space and lighting (fear it might be too dark or one would feel confined);
 - Want to know if the energy saves projected had come true;
 - Get a sense of if the home holds its value over time (especially among mobile home residents).

Response to Cost Savings and Financing Tools

- Different concepts and potential financial tools were shared with participants to better understand the kinds of financial incentives that would be most motivating and what additional information would be required. Participant responses reinforce the notion that they understand the “devil is in the details.” Even though the High Performance Home concepts are appealing, many also expressed skepticism until they could better understand the numbers. None of the financing options shown to participants helped them get over the barrier of a higher-priced home.
- Specific participants were asked to estimate the price of the High Performance home, which ranged widely, indicating people are not sure how to value such a home. For those who were shown the mobile home version, guesses included: more than \$50,000; over \$80,000 new; between \$85,000 and \$100,000, and between \$100,000 and \$120,000. A couple of participants

offered their estimated price of the cottage-style High Performance Home: \$120,000 and over \$200,000.

Monthly Payments Reference Sheet (See Appendix)

- The idea of having lower monthly payments due to much reduced energy cost might be attractive. However, a number of reservations emerge. Participants tend to view their energy costs as variable; a mortgage is considered a fixed cost.
- The degree of savings is surprising and almost too good to ring true. Many wanted to understand the situation more fully and really be able to plug in specific financial figures that reflect their personal situation.
- Some question the ability of finding a mortgage on a traditional (mobile) home at approximately \$240/month and wanted to understand the term of the mortgage, the interest rate, etc.
- Understanding the total cost of ownership is important (especially to renters and those at lower income levels). They want to know the other hidden costs that need to be taken into consideration (insurances, a variety of taxes, maintenance budget for the unexpected, etc.) Without considering these other costs, many feared they would not be accurately assessing the benefits and risks.
- The notion of being able to afford a high priced mortgage and still be within one's monthly budget is tempting, but many worry that such an incentive could potentially backfire on low income consumers and cautioned against enticing potential buyers into a situation where they might be living beyond their means with a higher mortgage payment.

Response to Mobile Home Recycling (See Appendix)

- The idea creates some interest, but is not a motivator in and of itself. It will not ease the barrier of a high fixed mortgage.
- For the most part, it leads to more questions: What will happen to the materials? Will they be refurbished or discarded in a sensible manner?
- It acts more as a supporting benefit (e.g., one participant to perk up and become more curious, when it was considered in the context of High Performance Home's functional benefits and if the economics of owning it would work).

Lease to Own (See Appendix)

- This financial mechanism is more familiar to most participants.
- Attention is drawn to the "leasing" and the notion of spending more than what a purchase is worth, which is a drawback.
- Questions: A what point does one own the home? Who pays for maintenance and other costs during the "lease portion" of the period?
- Most believe it would appeal to those who are getting on their feet financially (especially renters). It is considered the next step especially if one does not qualify for a traditional mortgage.

Response to On-Bill Financing (See Appendix)

- Some find the idea being able to get a lower mortgage appealing, but most found the concept unusual, confusing, and needing fuller explanation. The value proposition is not clear or motivating in its current form.

- Questions: Who owns the mortgage the lender or the utility? What is the benefit to the utility companies? What ability would utility company then have to turn off/control electricity if payment wasn't met?
- Many are highly skeptical of utility companies getting involved without knowing the business benefit to them.
- The idea of having two lenders seems to create more concerns. The homeowner would be taking on the same financial burden, so it is not necessarily seen as better than a single loan.

Marketing Insights

Potential Names

- Number of suggestions point to valued qualities: comfort home/sustainable home, energy efficient cottage, cute, compact, home of the future, green home, dream home, Efficiency Vermont homes, and among higher income participants: eco development, high efficiency homes, etc.
- **"High Performance Home"** seems to be attractive to a few tech savvy/energy-conscious males at higher incomes (who can link it to the idea of one's home performing, living, and breathing). However, the term does not resonate with everyday folk, especially at lower incomes. Most link it with fast sports cars/motor oil, which tends to run counter to one's sense of being energy efficient.
- **"Net Zero Home"** has little meaning to the large majority of participants. One linked it to the idea of being carbon neutral (but it was not considered an accurate description of these homes). The rest had no idea what it meant and did not offer suggestions.

Outreach Suggestions

- Participants suggested a number of outreach methods that would:
 - Increase awareness levels: have a presence at home and garden shows/renewable energy conferences/gatherings (e.g., SolarFest); open houses (model homes and developments for viewing with the opportunity to talk to current residents); local newspaper ads/TV spots, flyers with contact number/email, online/websites;
 - Efficiency Vermont and other partners offering education seminars;
 - Help educate/collaborate with: real estate agents; mobile home brokers; contractors/architects; lenders and appraisers; home improvement resources (Home Depot, weatherization agencies); utility companies, etc. Then they can become trusted sources to raise awareness, educate potential buyers or direct them to an expert who can.

Experience with Efficiency Vermont

- Many are introduced to Efficiency Vermont in relation to High Performance Home through a personal connection during the building process (often via a contractor).
- The service Efficiency Vermont provides related to High Performance Homes is considered valuable and honorable; however it can often feel a bit too specialized and limited.
 - (+) Efficiency Vermont has much goodwill when participants understand their role in helping reduce energy consumption. Many spoke of having positive interactions with Efficiency Vermont experts. For example, Efficiency Vermont's role was considered most helpful in the High Performance Housing developments, especially in assisting with

- meeting the energy efficiency standards during building as well as monitoring energy savings after moving in.
- (-) The interactions with Efficiency Vermont were somewhat disappointing in two situations with two participants who were designing and building their homes independently. There was a desire for Efficiency Vermont to be more engaged (e.g., come on-site during the construction and stay involved throughout the process, especially when problems arose with a contractor).
 - (-) There is a desire for Efficiency Vermont to advise on a broader, total energy usage perspective. For example, there is strong interest in renewable alternatives, especially solar power, across the sample.

Conclusions and Recommendations - Consumer Qualitative Research

Homeownership is linked with an emotional potency that is both positive (with attaining a long-awaited dream) and negative (many unknowns and fears). The benefits are deeply emotional but tend to be long term. The unknowns are more functional, short term, and measurable. These are huge barriers that must be overcome before consumers will seriously consider owning a High Performance Home.

The ideal consumer is difficult to identify because they don't neatly fit into a typical demographic profile such as age, income, and political orientation. The profile of those who will be most motivated to pursue more information and eventually buy or build a High Performance Home involve more subtle qualities:

- Tend to be risk takers;
- Are comfortable with change and the unknown;
- Are more analytical and enjoy the technical aspects of High Performance Homes;
- Seek to improve their current living situation;
- Are comfortable with making a long-term commitment and are confident their financial situation is stable for the long-term (more likely to be prior homeowners than renters and less likely to be lower income and retired consumers).

To move from a level of interest to one taking action, there is need to have a more **personalized approach** to talk through and understand the specifics of owning/building, financing, and living in a High Performance Home. The complexity and level of unknowns in a rather new market require a higher degree of guidance and handholding.

A “trusted advisor” is needed to help a potential homebuyer successfully enter into and navigate the High Performance Home building/buying process. One of the concerns voiced in this study is the lack of an expert acting on the buyer's behalf in a holistic fashion. Each player focuses on his or her areas of expertise, but rarely is there someone who can take into consideration the larger picture, help manage the information and decisions required, including communicated clearly and succinctly to the homebuyer, or stay engaged throughout the process as a resource when needed.

To be most successful, a potential buyer needs a reliable, trusted advisor who is closely in tune with his or her individual situation and needs, as well as who has the technical and financial expertise to answer

to the many questions that come up in ways that are relevant and easy to grasp. This means being able to provide a broad overview as well as drill down to a level of detail that matches the needs of the consumer. This is a role that Efficiency Vermont is well poised to play, perhaps with the assistance of collaborating partners.

Thus, such a trusted advisor would *ideally* help educate, guide, and be with the buyer each step of the way:

- Help visualize what a potential buyer’s High Performance Home would look like and take one through an actual home;
- Help clarify and understand the difference between a High Performance Home and a traditional home, especially in terms of needing to operate energy efficient heat and ventilation systems and thinking about regulating temperature or using different kinds of appliances (e.g., being “on the curve” vs. traditional thermostats, managing air ventilation: when to open and close windows, getting used to smaller-capacity, imported (German-made) appliance, etc.);
- Provide evidence that it is actually affordable by walking through the numbers where the buyer can understand the comparison between what they currently pay and what they will need to pay and where are the savings;
- Present different financial options and determine the best combination of financial incentives that are possible;
- Help navigate the next steps to getting a mortgage, and if appropriate:
 - Identify trustworthy, reliable, and experienced contractors (to avoid disappointments and expensive building mistakes);
 - Identify and educate lenders, appraisers, and real estate agents to facilitate the valuation, mortgage and buying processes;
 - Oversee and provide guidance throughout the mortgage and/or building process, especially if unusual questions and situations arise, even if they go beyond energy efficiency evaluation and monitoring.

Ideally, marketing efforts should be designed to create curiosity and motivate a potential buyer to contact a trusted advisor who will work with them on a personal basis to apply it to their own situation. Thus, marketing efforts may start off generally (with awareness building and interest building), but they need to motivate potential buyers to seek out the trusted advisor who takes a more specific, personalized, relationship-building, and communication approach.

Financial tools need to support:

- A) More personalized approach (e.g., having an app that allows one to punch in one’s financial information and make immediate and accurate comparisons);
- B) Help low-income consumers avoid the risk of losing one’s home (e.g., attending educational seminars: such as the mortgage classes required by Champlain Housing Trust to secure a loan or grant, perhaps Efficiency Vermont offers energy efficiency guidance on a variety of topics including learning how to operate the technology and maintain the systems to achieve maximum energy savings/reduction of energy consumption, etc.).

Note: Many low-income consumers would need reassurance that they would be able stay in their homes long term even if they experience financial glitches. It is important to consider if a

combination of financial incentives can accommodate a certain level of financial instability and at what point of stability does one qualify.

Overall Recommendations

These recommendations draw from both sets of research summarized above.

Based on the research, there is not a market¹⁴ for HP Homes in Vermont— yet. However, there also wasn't a market for the iPhone when it was first created. The question remains, “If you build it, will they come?” There are avenues to pursue to increase the chances that they will, as outlined below. This will require a significant effort with small returns for a relatively long period of time. Taking the steps outlined below will help create and build the market for HP Homes.

Focus on Consumer Needs

Throughout the planning, development and implementation efforts, make sure to focus on and highlight the HP Home features that respond to what buyers say they need. Keep the messaging and explanations simple and focused by avoiding technical jargon. A better name may also help connect to potential buyers.

Identify the compelling story for why these houses are a smart choice, including the important emotional benefits related to the esthetics and design, the quality of living, etc. Highlight the features of the HP homes that resonate with consumers including the fact that they are healthy, durable, bright with sunlight, ventilated, comfortable and come with low energy bills for the life of the home.

Overcome Skepticism

A key recommendation is the need to support a “trusted advisor” for potential buyers throughout this whole process. This person (or stable of people) should be from a third-party and provide end-to-end personal guidance for every step of the exploration and buying process.

In order to get potential customers into these HP Homes to see and experience all of the compelling features, provide opportunities for buyers to visit actual High Performance Homes. Sponsor model homes and open houses at high-traffic locations like fairs and shopping malls and make model homes available at parks and other locations.

Overcome the skepticism that these homes are “too good to be true” by publicizing actual energy bill data, developing testimonials, developing and supporting a HP Homes owner network through blogs and other avenues, and evaluating the early experiences. One other avenue would be to develop and support an energy usage guarantee with a reputable organization like Efficiency Vermont standing behind the promoted low energy bills.

Legitimize HP Homes

Sponsor awards that feature HP Homes at widely attended events like the Home Builders and Remodelers Association's “Better Homes Awards”, Efficiency Vermont's Better Buildings by Design Conference “Best of the Best Awards” the Vermont Statewide Housing Conference, and other events.

¹⁴ For the purposes of this study, we define “market” as: a large enough group of potential buyers with common characteristics and interests to warrant shaping outreach and marketing to respond to their particular wants and needs.

Develop and provide “earned media stories” to the press to help publicize and legitimize HP Homes and smaller homes in general. Focus on home buying special supplements that seek stories of new and advanced products and technology, and make sure to get in front of potential home buyers regularly.

Work to include information on the benefits of HP Homes to homebuyer educators to ensure that homebuyers start building an understanding of these homes as early in the process as possible and from respected unbiased organizations.

Improve Financing

Financing HP Homes can be a significant barrier that needs to be overcome if buyers are going to be able to qualify for and purchase these homes. Partner with willing lenders who are able to control their underwriting standards locally to enable more flexibility. Provide on-going training, support and promotion as they commit to help. Make sure that their loan officers tour a HP Home so that they become more familiar with the product and understand its features and benefits. Feed them business in return for participating and recognize and publicize them for their efforts.

Work with the lender partners to develop simple, accessible, affordable, workable, pre-packaged financing that buyers can access to increase the likelihood of qualification. Work to incorporate energy savings into the mortgage underwriting process to relax the qualifications for buyers who will have reduced energy bills for the life of that home. Consider developing and offering additional features such as “guaranteed resale financing”. In order to differentiate HP Homes from conventional mobile homes, obtain agreements that the mortgages available to buyers of HPHs will have terms at least as favorable as stick-built homes.

Include a list of participating lenders in outreach about HPHs, and work with the trusted advisors to build relationships with these lenders. These advisors should help match buyers with lenders and serve as the consistent guide and advocate for the buyers throughout the financing process.

Improve Appraisals

Addressing appraisal issues will be key in recognizing the true value of these homes and permitting buyers to qualify for a higher mortgage amount. Ensure that every transaction includes the following:

1. “Competent” appraiser who has met the qualifications to appraise this “specialized home”;
2. The appraiser is familiar with the Appraisal Institute Addendum; and
3. The lender’s appraisal order should state that this appraisal is a “complex valuation assignment of a specialized home” in order to ensure that only a “competent appraiser” is selected for the job.

Efficiency Vermont and the Vermont Green Homes Alliance¹⁵ should continue the on-going partnership with Vermont Association of Professional Real Estate Appraisers and support training in order to build a statewide list of “competent” appraisers. Align qualified appraisers with partner lenders for the best chance of maximizing appraisals on HP Homes.

¹⁵ <http://www.vermontgreenhomealliance.org/>

Pursue & Develop Partnerships

The foundation of a successful market for High Performance Homes will be partnerships. Partnerships can serve to enhance both the market-based and program-based approaches to selling HP Homes. There are numerous partnership opportunities that could be explored and leveraged, with a goal of identifying a number of partners who can become “champions” for the High Performance Homes. Partners can introduce High Performance Homes to their employees, members, customers and associates, provide legitimacy for the product, offer hand-holding, information and resources to home buyers and may even assist with pre-arranged financing. Every prospect and final arrangement with a partnership will be unique, but there are usually enough mutually-beneficial opportunities worth exploring between the High Performance Home sponsors and potential partners that we are convinced that a Memorandum of Understanding (MOU) that benefits both parties can be consummated after most conversations.

The movement to develop a “market” for HP Homes is going to require many efforts on multiple fronts. This will include multiple partners and a concerted effort to identify and develop partners who can “champion” HP Homes. Efficiency Vermont and VHCB should certainly continue in that role, but it will also be necessary to build other organizations and individuals as well in order to advance the movement. Engage organizations such as the following:

- Community Land Trusts, Housing Development Corporations, and Mobile Home Park Non-Profit Owners;
- Financial, Lending, Realtor and Appraisal Partners;
- Non-Profit and Government Partners;
- Green and Socially-Responsible Businesses and Business Organizations;
- NextStep Network (possibly with New Hampshire);
- Regional Planning Commissions, Act 250; and
- Builders and Architects.

We recommend walking through the following list of potential partners provided to discuss, rank and prioritize the opportunities. Develop an understanding of what each potential partner would need out of a relationship that would benefit their mission, goals or employee recruitment and retention objectives, and be clear what the High Performance Home Working Group could offer in exchange. This could include training, materials, resources, subsidies, marketing, press recognition or other benefits. Reach out and meet with the potential partners to hear what they are thinking and explore mutually-beneficial opportunities. Develop a simple MOU that commits the High Performance Home Working Group to supporting the partner as a follow-up to demonstrate commitment and make sure to follow through. While none of us know all of the possible permutations that derive from these partnerships, we know enough about the passion and creativity of the housing and financial community in Vermont that we are convinced there are bound to be successes.

Partnerships - General

Recommendation	How the partnership would work	Key partnering organization(s)	Estimated likelihood of success*
Ensure that appraisers used by lenders are qualified and competent to appraise energy efficient housing	(See information provided by Efficiency Vermont in the Appendix). Create list of HPH-trained appraisers for lenders and buyers Develop lender-appraiser partnerships especially for HPHs	<ul style="list-style-type: none"> VT Association of Professional Real Estate Appraisers VT Mortgage Bankers Association 	High (VEIC has already developed a list of appraisers for HP Mobile Home)
Develop “participating lender” group who offer mortgages for HPHs with terms comparable or better than other homes.	Get agreements that the mortgages available to buyers of HPHs will have terms at least as favorable as stick-built homes (loan-to-value ratio, interest rate, term). Include list of participating lenders in outreach about HPHs.	<ul style="list-style-type: none"> Lenders who hold mortgages they make in their own portfolio or otherwise have flexibility in the terms offered and experience with HPHs (see lenders listed in appendix). 	High (VEIC has already developed a lender list for HP Mobile Home)
Seek inclusion of HPHs in shared equity programs offered by community land trusts.	Work with land trusts to purchase HPHs as shared equity homes. This model would mitigate some uncertainty about the future value of the home and streamline the process of getting a home owner into the home.	<ul style="list-style-type: none"> Community land trusts that have a shared equity program (Champlain Housing Trust, Central Vermont Community Land Trust, Windham and Windsor Housing Trust, Rural Edge and NeighborWorks of Northwestern Vermont) 	Good
Develop affordable rental housing neighborhood of high performance homes	Low-Income Housing Tax Credits are the primary funding source for the development of affordable rental housing. Although virtually always used to develop multifamily buildings that contain rental apartments, it is possible that a developer/owner could purchase HPHs, site them, and then rent them to qualified households.	<ul style="list-style-type: none"> Housing development corporation, including non-profit HDCs VHFA 	Good, though there is tight competition for tax credits. Per unit cost of HP Mobile Homes compares favorably, especially outside of MSA or with smaller than average lot sizes, with typical newly constructed units.

Develop rent to own affordable housing	Qualified low-income tenants can purchase homes after 15 year period. Units are financed initially with Low-Income Housing Tax Credits.	<ul style="list-style-type: none"> • Housing development corporation, including non-profit HDCs • VHFA 	Good, though there is tight competition for tax credits. (Utah Housing Corp. and Provo City Housing Authority are partnering to do this).
Develop neighborhood of owner units	Combine state-controlled funding sources (state housing credits, CDBG, and VHCB homeland grants) to support the development of a neighborhood of owner units, perhaps through shared equity model.	<ul style="list-style-type: none"> • Housing development corporation, including non-profit HDCs • VHFA (housing credits) • VHCB (homeland grant) • VT DHCD (CDBG) 	Good
Coach for purchase and ownership to fill role of “trusted advisor”	Coach (staff from non-profit) walks buyer through the entire process, including maintenance issues during ownership. Provide outreach to dealers of HPHs so that they can publicize the availability of this service to potential buyers.	<ul style="list-style-type: none"> • VEIC, VHCB or other non-profit with expertise in HPHs • Funder for coach staff time 	High
Educate financial, lending and appraiser partners	Develop “road show” workshops to provide to associations of real estate agents, appraisers and lenders to educate about HPHs.	<ul style="list-style-type: none"> • VEIC, VHCB or other non-profit with expertise in HPHs • Funder for staff time 	Good
Promote employer-assisted housing via HPHs	In conjunction with area employers and chamber of commerce, develop employer-assisted housing approach that embraces HPHs. Identify employers who may be most receptive to HPH concept (Environmental mission? Already have an employer-assisted housing program?)	<ul style="list-style-type: none"> • Chambers of commerce, VBSR and other business groups • VEIC, VHCB or other non-profit with expertise in HPHs • Funder for staff time 	Fair
Offer energy budget plan	Offer budget plan with minimal, fixed monthly payment at purchase and describe process of eliminating payment altogether (based on prior year’s consumption).	<ul style="list-style-type: none"> • Green Mountain Power • Other VT energy providers • VEIC 	Good
Create HPH owner network	Non-profit partner creates network (and website?) for HPH home owners, potential buyers and others interested. Home owners can post discussion about maintenance and photos of their homes. Non-profit partner can pose questions to the group through social media that spurs conversation highlighting the benefits of living in an	<ul style="list-style-type: none"> • VEIC, VHCB or other partner with HPH and outreach expertise. • HPH dealers • Financial, lending and appraiser partners 	Good

	HPH for potential buyers to see. Financial, lending and value partners and HPH suppliers are provided with outreach material about the network to share with potential HPH buyers.		
Evaluation of early experiences	Commission an evaluation of front runner experiences with HPHs to demonstrate buyer satisfaction and net-zero energy use. Would include assessing energy consumption, repairs, comfort and other experiences of initial years of living in HPH.	<ul style="list-style-type: none"> • UVM Public Administration program • VEIC, VHCB or other non-profit to share results 	Good
Encourage discussion of HPH in home buyer education	In conjunction with providers of homebuyer education, develop materials that offer information on HPHs. Information would include why buying an HPH saves money in the long run and how to proceed with buying an HPH.	<ul style="list-style-type: none"> • Homeownership centers at Champlain Housing Trust, Rural Edge, NeighborWorks of Western VT, Windham & Windsor Housing Trust and Central VT Land Trust • Other providers of home buyer education 	Good
Develop and share electronic tool for estimating monthly expenses	Develop a mobile app and web site tool that can be used by prospective home buyers to estimate their monthly combined mortgage and utility costs. Share with suppliers of HPHs and realtor association, encouraging them to share with potential buyers.	<ul style="list-style-type: none"> • VEIC • VHFA • Funder for tool development 	Good
Expand outreach to markets with health needs for new, low VOC home.	Identify health conditions benefitting most from new, low VOC homes. Develop outreach materials for this segment, emphasizing health benefits and share with associations serving this market, such as association of allergists, Fletcher Allen Health Care.	Professional association of doctors who serve patients who need new, low VOC homes.	Fair
Offer a model that can be “off the grid.”	A small, tight, energy-efficient model that can be placed on undeveloped lots would provide market advantage.	<ul style="list-style-type: none"> • Architect • Builder 	Fair
Develop and share detailed fact sheet on financial benefits of buying and owning a HPH	Develop a fact sheet that compares buying and owning an HPH with (1) renting a home, (2) buying and owning a conventional home. Include estimated effects of Mortgage Interest Deduction, property taxes and monthly utility costs,	<ul style="list-style-type: none"> • VEIC, VHFA or other lender who could help develop scenarios. 	Good

Potential HP Mobile Home-Specific Partnerships

Objective of partnership	How partnership would work	Key partnering organization(s)	Estimated likelihood of success (Fair, Good, High)
Cultivate relationships with non-profit partners currently doing mobile home replacement	Create linkages and obtain funding needed to increase the use of HP Mobile Home as replacement homes (vs. other new models) when partnering organizations are involved.	<ul style="list-style-type: none"> • VEIC, VHCB or other non-profit with expertise in HPHs • Champlain Housing Trust • Champlain Valley Office of Economic Opportunity • VHFA • Funder for staff time • Funder for purchase subsidies 	Good
Replace deteriorating homes	Obtain funds from VT DHCD (CDBG), VHCB (Homeland grants), VHFA (state housing credits) or other organization. Non-profit organizations administer grants. Subsidize purchase of new unit, based on income of resident either through reduction of purchase price or down payment assistance.	<ul style="list-style-type: none"> • Non-profits, including community land trusts, that manage parks • VT DHCD • VHCB • VHFA • Other funders 	Good, existing program is doing this, but more funds will extend scope and allow for more HP Mobile Homes (vs. less efficient homes)
Join or replicate Next Step Network	This national non-profit organization links local non-profits to manufactured housing builders in order to replace HUD 1976 and older model mobile homes with new energy efficient models. Next Step enables non-profits to order directly from the manufacturer and underwrites the financing. With no dealership, the non-profits can offer competitive, factory-direct pricing for energy efficient homes. Currently, Next Step has no VT partners, but its New Hampshire partner, AHEAD (Affordable Housing Education and Development), has expressed plans to expand its service area into Vermont and Maine. Not pursuing this partnership might impair efforts to promote use of HP Mobile Home if AHEAD is not educated about HPHs.	<ul style="list-style-type: none"> • Next Step Network • VEIC • CHT • VEIC 	High (recommended in December 2013 “Report on the Viability and Disaster Resilience of Mobile Home Ownership and Parks”)

Landscaping	Promote complimentary landscape designs that help improve the image of the HP Mobile Home to general public. Provide internship opportunity for UVM students to develop landscape plans, both for park and owned land. Offer donated or discounted plantings and installation.	<ul style="list-style-type: none"> • UVM Sustainable Landscape Horticulture Degree program • Local plant suppliers 	High
Offer accessories and add-ons that can be added now or in future	Partner with architect, builder to offer plans and purchase of additional components, like extra bedroom, carport, sunroom, screen porch, Growing, young families [the group that is most likely to purchase homes] may need this to consider the HP MOBILE HOME option.	<ul style="list-style-type: none"> • Architect • Builder 	Good (this may already be happening through the variety of floor plans available)
Market the HP Mobile Home as an accessory dwelling unit	In addition to use as a primary residence, market the studio HP Mobile Home floor plan as an accessory dwelling unit for family or renters. Partner with regional planning commissions or VHFA to develop list of Vermont and municipal regulations affecting the feasibility of this (Percentage of primary home square footage that may become an ADU, percentage of lot that may be impervious surface).	<ul style="list-style-type: none"> • Regional planning commissions or VHFA 	Uncertain (how does price of HP Mobile Home studio compare with price of building and heating a similar sized addition to house?)

*Ratings are based on the estimated feasibility and impact of the recommendation.

Segment the Market

In thinking about the HP Homes market and planning for efforts going forward, it makes sense to segment it into its distinct parts, since each segment will require different approaches and partners in order to succeed. The broader market for new homes breaks out into the subsidized market (for both rental and ownership) and the conventional market in terms of HP Homes. These are discussed in more detail below.

Subsidized (Rental & Ownership)

Low income Vermonters would be thrilled to live in a HP Home, but will not be able to purchase or rent either of the HP Homes without financial assistance. These families most in need of energy cost escalation protection, as they are most vulnerable to the consequences of rising energy costs.

Developing HP Homes for rent will require some creative deals and partnerships. One subsidized rental models could include establishing an affordable rental housing neighborhood of HP Mobile Homes using Low-Income Housing Tax Credits.

For lower-income Vermonters looking to purchase a HP Home, the down payment challenge may be the bigger issue than the ability to make monthly payments, although both will likely need attention. Subsidies to help reduce cost of entry could help more families qualify for a mortgage, and then reliable energy costs could make a real difference, especially if special financing can be developed that factors in those lower costs. Subsidized ownership models could include pursuing a community land trust shared equity program, a rent-to-own lease-mortgage arrangement, or developing a neighborhood of owned HP Homes.

Conventional Market

There will always be a few eco-conscious, down-sizing, tech-savvy, financially-secure, risk-taking, early-adopters who are interested in purchasing a HP Home. However, developing a new market for HPHs will take some time and will require providing opportunities to experience these homes in-person with open houses and model homes, getting the message out to potential niche markets, and providing that trusted advisor for information and hand-holding through the sales and purchasing process.

In the open market, there may be opportunities to promote employer-sponsorship of HP Homes by partnering with responsible employers to encourage them to promote and possibly offer financing or other assistance to their employees to help purchase HP Cottage Homes. Identify employers who may be most receptive, such as those with an environmental mission or already have an employer-assisted housing program.

In addition, to help stimulate a new market for HP Homes, focus on those areas of Vermont where these homes can be more competitive; outside of the MSA and the Northeast Kingdom, where house prices and sizes are more in line with HP Cottage Homes. In these areas, the best chance for success will be to focus on higher income groups who can better afford HP Homes.

Appendix

Appendix for Market Demographics Research

Community Land Trusts, Housing Development Corporations, and Mobile Home Park Non-Profit Owners

HOPE

Jeanne Montross, Executive Director
PO Box 165
282 Boardman Street
Middlebury, VT 05753
Phone: (802) 388-3608
Fax: (802) 388-0756
Email: jmontross@hope-vt.org
Website: www.hope-vt.org
Serving Addison County

Addison County Community Trust (MH park owner)

Terry McKnight, Executive Director
PO Box 311
Vergennes, VT 05491
Phone: (802) 877-2626
Fax: (802) 877-2627
Email: terry@addisontrust.org
Website: <http://www.addisontrust.org/>
Serving Addison County

Brattleboro Area Affordable Housing

Gary Goodemote, President
(contact: Byron Stookey)
PO Box 1284
Brattleboro, VT 05302
Phone: (802) 257-4691
Website: www.baahvt.org
Email: stookey@sover.net

Cathedral Square Corporation

Nancy R. Eldridge, Executive Director
308 Pine Street
Burlington, VT 05401
Phone: (802) 863-2224
Fax: (802) 863-6661
Email: eldridge@cathedralsquare.org
Website: www.cathedralsquare.org
Serving all Vermont counties

Central Vermont Community Land Trust (MH park owner)

Eileen Peltier, Executive Director
107 North Main Street
Barre, VT 05641
Phone: (802) 476-4493
Fax: (802) 479-0120
Email: epeltier@cvclt.org
Website: www.cvclt.org
Serving all of Washington County and parts of Orange and Lamoille Counties

Champlain Housing Trust

Brenda Torpy, CEO
Emily Higgins, Mobile Home Replacement Program
88 King Street
Burlington, VT 05401
Phone: (802) 862-6244
Fax: (802) 862-5054
Email:
brenda.torpy@champlainhousingtrust.org,
Emily.higgins@champlainhousingtrust.org
Website: www.champlainhousingtrust.org
Serving Chittenden, Franklin, and Grand Isle Counties

Chittenden Housing Corporation

Ed Willenbaker, Executive Director
83 Barlow Street
Winooski, VT 05404
Phone: (802) 655-2360
Fax: (802) 655-5540
Email: wbaker@together.net
Serving Burlington and Winooski

Rural Edge (formerly Gilman Housing Trust) (MH park owner)

Merten Bangemann-Johnson, CEO
48 Elm Street – P.O. Box 259
Lyndonville, VT 05851
Phone: (802) 535-3555
Toll Free: (888) MY VT HOME (698-8466)
Fax: (877) 689-3760
Email: mertenbj@nekhomes.org

Website: www.myvthome.org
www.ruraledge.org

Serving the Northeast Kingdom Counties of Caledonia, Essex, and Orleans

Housing Foundation Inc. (MH park owner)

Alison Bell, President
P.O. Box 157

Montpelier, VT 05602-0157

Phone: (802) 828-3295

Fax: (802) 828-3248

Email:

contact@thehousingfoundationinc.org

Website: <http://thehousingfoundationinc.org>

Serving all Vermont Counties

Housing Vermont

Nancy Owens, President

123 St. Paul Street

Burlington, VT 05401

Phone: (802) 863-8424

Fax: (802) 660-9034

Email: nancy@hvt.org

Website: www.hvt.org

Lamoille Housing Partnership (MH park owner)

Jim Lovinsky, Executive Director
PO Box 637 – 49 Brigham Street
Morrisville, VT 05661

Phone: (802) 888-5714

Fax: (802) 888-7304

Email: info@lamoillehousing.org

Website: <http://www.lamoillehousing.org/>

Serving Lamoille Valley Region

Randolph Area Community Development Corp. (MH park owner)

Julie Iffland, Executive Director
PO Box 409 – 21 Main Street
Randolph, VT 05060

Phone: (802) 728-4305

Fax: (802) 728-6721

Email: racdc@racdc.com

Website: www.racdc.com

Serving Braintree, Brookfield, and Randolph

Regional Affordable Housing Corporation

John Broderick, Executive Director
PO Box 1247 - 302 South Street
Bennington, VT 05201

Phone: (802) 442-8139

Fax: (802) 442-5125

Email: john@benningtonhousing.org

Website: www.benningtonhousing.org

Housing Trust of Rutland County (MH park owner)

Elisabeth Kulas, Executive Director
13 Center St., 2nd Floor
Rutland, VT 05701

Phone: (802) 775-3139

Fax: (802) 775-0434

Email: info@housingrutland.org

Website: www.HousingRutland.org

Serving Rutland County

Twin Pines Housing Trust (MH park owner)

Andrew Winter, Executive Director
240 S. Main Street, Suite 4
White River Junction, VT 05001-7072

Phone: (802) 291-7000

Fax: (802) 291-7273

Email: andrew.winter@tphtrust.org

Website: www.tphtrust.org

Serving Bethel, Bradford, Bridgewater, Fairlee, Hartford, Hartland, Newbury, Norwich, Pomfret, Royalton, Sharon, Stafford, Thetford, Topsham, Tunbridge, Vershire, W. Fairlee, W. Windsor, Windsor, Woodstock; and adjacent New Hampshire towns

Windham and Windsor Housing Trust (MH park owner)

Connie Snow, Director
68 Birge Street
Brattleboro, VT 05301

Phone: (802) 254-4604

Fax: (802) 254-4656

E-mail: CSnow@w-wht.org

Website: <http://www.w-wht.org/>

Serving Windham County

Shires Housing (MH park owner)

Shires Housing
PO Box 1247
Bennington, VT 05201

Phone: 802-442-8139

Fax: 802-442-5125

Email: rahc@comcast.net

Other MH park coop owners (not associated with larger organizations)

- Milton MH Cooperative, (802) 527-2361
- Homestead Acres Co-op Inc., (802) 527-2361
- Tri-Park Cooperative Housing, (802) 257-4877
- Bunker Hill Community Cooperative, (802) 674-6386

EFFICIENCY VERMONT

Jeffrey Gephart
PO Box 258
Rochester, VT 05767
Phone: 802-767-3861
Fax: 800-893-1997
Email: vtwise@together.net

VERMONT HOUSING FINANCE AGENCY

Sarah Carpenter
Email: scarpenter@vhfa.org
Phone: 802.652.3421

VERMONT DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT

Jenifer Hollar, Arthur Hamlin

VERMONT HOUSING AND CONSERVATION BOARD

Gus Selig, Craig Pelletier

NeighborWorks® of Western Vermont

110 Marble Street, West Rutland, VT 05777
Mary Cohen
mcohen@nwwvt.org
(802) 438-2303 x 211

NEXT STEP NETWORK

This is a national non-profit organization that links non-profits to manufactured housing builders in order to replace HUD 1976 and older model mobile homes with new models rated national ENERGY STAR for manufactured housing. Next Step provides technical assistance for the non-profits to make direct orders from the manufacturer for a wide variety of replacement dwellings and it underwrites the financing for Next Step homes installed to its specifications. As this process eliminates the mobile home/manufactured housing dealership, the non-profits can offer competitive, factory-direct pricing for energy efficient homes.

UNIVERSITY OF VERMONT

1. Community Development and Applied Economics Department
Masters of Public Administration Program
Chris Koliba, Director christopher.koliba@umv.edu
2. Department of Plant and Soil Science
Sustainable Landscape Horticulture Degree Program
Deborah Neher, Department Chair
Deborah.neher@uvm.edu

VBSR

Vermont Businesses for Social Responsibility (VBSR) is a non-profit, statewide business trade organization with a mission to advance business ethics that value multiple bottom lines- economic, social, and environmental. We strive to help members set a high standard for protecting the natural, human and economic environments of the state's residents, while remaining profitable. We advance VBSR's mission through:

Education. Empowering our members to solve environmental, social and economic problems. We provide concrete resources and information to help improve our members' business practices.

Public Influence. Initiating tangible change in public policy that combats exploitation and promotes sustainability. We work to capture the inherent power of business to represent socially responsible ideals to legislative bodies, news media, and the general public.

Workplace Quality. Enabling every worker to live and work with respect and dignity by creating work environments and economic climates that provide fair income in safe work settings, and allow each employee to contribute to a high quality product or service.

VBSR has a diverse business membership that represents all sectors and geographic regions of Vermont. Collectively VBSR members employ more than 14% of Vermont's workforce and generate more than 4 billion dollars in revenue annually. 60% of our members have been in business more than 10 years. To see what businesses belong to VBSR, please consult our Member Directory.

<http://vbsr.org/>

**VT CHAPTER OF THE APPRIASAL
INSTITUTE**

Jacqueline Beauchaine, Executive Director
Phone: 860-482-9992
Email: connecticut_chapte@sbcglobal.net
Website: <http://www.ai-vt.org/>

**VERMONT ASSOCIATION OF
REALTORS**

PO Box 165
148 State St
Montpelier, VT 05602
Phone: (802) 229-0513
Email: mary@vermontrealtors.com
Website: <https://www.vermontrealtors.com/>

PASSUMPSIC SAVINGS BANK

P.O. Box 38
St. Johnsbury, VT 05819
Phone: (800) 370-3196
Website: <https://www.passumpsicbank.com/>

UNION BANK

Claire Hindes, Vice President/Branch Manager

20 Lower Main Street, Rte. 100
P.O. Box 667
Morrisville, VT 05661

Phone: (802) 888-6600
Fax: (802) 888-7697
Website:
<http://www.unionbankvt.com/locations/morrisville-main.htm>

**NEW ENGLAND FEDERAL CREDIT
UNION**

PO Box 527
Williston, VT 05495
Phone: 800-400-8790
Website: <https://www.nefcu.com/>

**NORTH COUNTRY FEDERAL CREDIT
UNION**

PO Box 64709
Burlington, VT 05406
Phone: (800) 660-3258.
Email: memberservices@northcountry.org

Website:

<https://www.northcountry.org/home/home>

**VERMONT STATE EMPLOYEES CREDIT
UNION**

PO Box 67
1 Bailey Avenue
Montpelier, VT 05602
Phone: (802) 371-5162
Fax: (802)-223-0267
Email: BoardofDirectors@vsecu.com
Website: <https://www.vsecu.com/>

Opportunities Credit Union

25 Winooski Falls Way, Suite 203
P.O. Box 67
Winooski, VT 05404
800-865-8328
<https://www.oppsvt.org/>
Cheryl Fatnassi, CEO

Green Mountain Credit Union





4 Laurel Hill Drive (off Shelburne Road)
South Burlington, VT 05403
802.864.6892 phone
802.660.9692 Fax
800.360.6892 Toll Free
<http://www.greenmountaincu.com>

VERMOD Buyer Survey

Do you expect to be the builder of all or some of your new manufactured or small house?

Response	Chart	Percentage	Count
Yes		34.5%	10
No		65.5%	19
		Total Responses	29

What is your initial reaction to the VERMOD model home?

Response	Chart	Percentage	Count
I really like it and want to learn more		51.7%	15
It's intriguing		37.9%	11
It's ok		3.4%	1
It's not for me. Why not?		6.9%	2
		Total Responses	29

What is your initial reaction to the VERMOD model home (It's not for me. Why not?)

#	Response
1.	I have a home but hopefully for others

How soon do you plan to buy or build a manufactured or small home?

Response	Chart	Percentage	Count
By the end of 2014		20.7%	6
By the end of 2016		17.2%	5
By the end of 2018		6.9%	2
Other, please specify...		55.2%	16
		Total Responses	29

How soon do you plan to buy or build a manufactured or small home? (Other, please specify...)

- 8 – no plan to build
- 1 – by end of 2014 or 2016
- 3 – unsure
- 2 – just exploring • 1 – have one now

In what season(s) do you expect to occupy this home?

Response	Chart	Percentage	Count
Year-round		75.0%	21
Other, please specify...		25.0%	7
		Total Responses	28

Where do you plan to locate this home?

Response	Chart	Percentage	Count
On land I own		46.4%	13
On land owned by family or friends		3.6%	1
In a mobile home park		7.1%	2
Other, please specify...		42.9%	12
		Total Responses	28

Where do you plan to locate this home (Other, please specify...)

- 7 – no plan or don't know
- 1 – on land I will acquire
- 1 – on land I own and in a mobile home park
- 2 – on current property

Household Composition - # of adults (18 -64)

Response	Chart	Percentages	Count
1		40%	6
1-2		6%	1
2		53%	8





of seniors (65+)

Response	Chart	Percentages	Count
1		25%	2
1-2		25%	2
2		62%	5






What is your current housing situation?

Response	Chart	Percentage	Count
Rent an apartment		14.3%	4
Rent a house or mobile home		10.7%	3
Own a house or mobile home on land I own		60.7%	17
Own a mobile home in a park		0.0%	0
Live with family or friends		10.7%	3
Homeless/in transition		3.6%	1
Total Responses			28






What did you like most about the VERMOD home?

Response	Chart	Percentages	Count
Cost of heat		11%	3
Design - open & bright		19%	5
Energy Efficiency		73%	19
Quality		11%	3


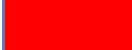

What did you like second most about the VERMOD home?

Response	Chart	Percentages	Count
Efficiency/Solar		17%	4
Layout & Design		21%	5
Potential to save \$\$		8%	2
Spaciousness		30%	7
Windows/Light		17%	4






What did you like the least about the VERMOD home?

Response	Chart	Percentages	Count
Lack of porch/outdoor space/storage		19%	4
Layout or aesthetics		28%	6
Not much		14%	3
Size-related		23%	5
Trailer-shape		14%	3

What do you expect to pay for your new or manufactured home?

Response	Chart	Percentages	Count
Don't Know		42%	8
~\$100,000		36%	7
~\$50-75,000		15%	3

How much of this amount will you need to borrow?

Response	Chart	Percentages	Count
0 - None		36%	7
5-40% (some)		15%	3
50% - about 1/2		10%	2
75% + - Most of it		15%	3
Don't Know		21%	4

What changes would make the VERMOD model home more appealing to you?

#	Response
1.	More wood (real)
2.	Would rather have a square layout
3.	I am asking for a double wide unit, and a deck
4.	A different layout - more like a "tiny house" look
5.	One bathroom
6.	None
7.	Cosmetic changes such as in the kitchen
8.	Battery back-up for PV system
9.	None
10.	Layout includes too much space wasted on hallways. Makes bedrooms seem small and pokey. No black appliances. Change ugly flooring. Cabinet color is ugly too
11.	outside appearance
12.	can't think of anything
13.	Add natural lighting to the second bathroom (note: mentioned this would save energy by eliminating need for lights in the daytime). Possibly add a sliding glass door in the living room. Access to a basement.
14.	I would rather build/acquire my own built-ins or kitchen furnishings
15.	covered porch
16.	a version a couple hundred feed bigger away from trailer park and toward camp/country home with more "Vermont character"
17.	porch (either front or back)

Your age

Response	Chart	Percentage	Count
Under 30		17.4%	4
30-55		13.0%	3
over 55		69.6%	16
		Total Responses	23

Your annual household income

Response	Chart	Percentage	Count
Under \$25,000		9.5%	2
\$25,000-\$49,999		61.9%	13
\$50,000-\$79,999		19.0%	4
\$80,000-\$120,000		9.5%	2
Over \$120,000		0.0%	0
		Total Responses	21

Appendix Like most?

#	Response
1.	[Cost of heat]Insulation, cost of heat
2.	[Cost of heat][Design - open & bright]cost efficiency
3.	[Design - open & bright]The soothing hum of the CERN, deep window sills - beautiful windows
4.	[Design - open & bright]Walking around in warmth, windows and sills, my feet are warm
5.	[Design - open & bright]it's more open and airy than expected - vaulted ceilings
6.	[Energy Efficiency]Efficiency
7.	[Energy Efficiency]Efficiency
8.	[Energy Efficiency]Efficiency
9.	[Energy Efficiency]Efficiency and sound heating system
10.	[Energy Efficiency]Energy efficiency
11.	[Energy Efficiency]Energy efficiency, appeal to financial institutions
12.	[Energy Efficiency]Energy efficiency, windows, thickness of walls
13.	[Energy Efficiency]Energy efficient - one floor layout option to add solar
14.	[Energy Efficiency]Super energy efficient
15.	[Energy Efficiency]The efficiency - I want the solar and heating efficiency in a home. To be more green.
16.	[Energy Efficiency]The efficiency is extremely compelling
17.	[Energy Efficiency]The efficiency of the design (energy)
18.	[Energy Efficiency]The efficiency throughout!
19.	[Energy Efficiency]The energy efficiency features
20.	[Energy Efficiency]energy efficiency, brightness, looks large, nice layout
21.	[Energy Efficiency]new technology regarding heat exchange systems, concept of efficiency and prefab construction
22.	[Energy Efficiency][Cost of heat]Insulation value, heat/vent
23.	[Energy Efficiency][Design - open & bright]Bright, large windows; energy efficiency; size

24.	[Energy Efficiency][Quality]The efficiency
25.	[Quality]Even though it is aimed at "affordable" market, it has energy features and amenities that you would find in much more expensive homes.
26.	[Quality]Quality

Like second most

#	Response
1.	Its thick walls
2.	air quality
3.	[Efficiency/Solar]All the surfaces seem warm (insulation!)
4.	[Efficiency/Solar]Efficiency
5.	[Efficiency/Solar]The solar exchange
6.	[Efficiency/Solar][Layout & Design]Rentless dryer
7.	[Layout & Design]Layout workable, 2 bathrooms
8.	[Layout & Design]flexibility of construction format regarding rooms, set up, etc.
9.	[Layout & Design]general layout with full bath and bedrooms on opposite sides of house
10.	[Layout & Design]good layout with utility room off 2nd door
11.	[Potential to save \$\$]Potential saving \$
12.	[Potential to save \$\$]affordability
13.	[Spaciousness]Good space
14.	[Spaciousness]Roomy
15.	[Spaciousness]Spaciousness and sunny and that it won't depreciate!!
16.	[Spaciousness]The option to add photovoltaic solar power
17.	[Spaciousness]The two bedroom/two bath version that I saw on display seems perfect for shared living
18.	[Spaciousness]space
19.	[Spaciousness]spacious
20.	[Windows/Light]Light
21.	[Windows/Light]Simple lines and lots of light

22.	[Windows/Light]The big windows!
23.	[Windows/Light]The windows

Like Least

#	Response
1.	not ready for this model, but interested in other models
2.	[Lack of porch/outdoor space/storage]A large outdoor attached space
3.	[Lack of porch/outdoor space/storage]no porch included with price
4.	[Lack of porch/outdoor space/storage]no porch, no storage
5.	[Lack of porch/outdoor space/storage]storage
6.	[Layout or aesthetics]Aesthetics - ugly choices made; wasted space
7.	[Layout or aesthetics]Bathroom floor finish = cheap feeling
8.	[Layout or aesthetics]Layout
9.	[Layout or aesthetics]aesthetically, floors
10.	[Layout or aesthetics]no carpets
11.	[Not much]I don't have a "least like"
12.	[Not much]Unsure
13.	[Not much][Layout or aesthetics]not much
14.	[Size-related]Bedroom size a little small
15.	[Size-related]Livings room could be roomier
16.	[Size-related]Only 2 bedrooms
17.	[Size-related]Small rooms, hollow doors
18.	[Size-related]small
19.	[Trailer-shape]Call me closed minded, but I don't want to live in a "trailer" shaped home. I guess there's a stigma there for me, which I feel awful about.
20.	[Trailer-shape]Trailer shape
21.	[Trailer-shape]the long shape to make it trailer park friendly, but suppose that's the point

Data Sources

Data sources included the following:

- American Community Survey
- U.S. 2010 Census
- Vermont Department of Housing and Community Development (DHCD) and Vermont State Housing Authority mobile home park and resident information, Housing Program Coordinator
- Vermont homeownership organizations, if there is additional detailed information not adequately provided by the above sources, including the following:
- Vermont Housing Data website (www.housingdata.org, which VHFA manages. This includes profiles of communities, counties, and state level, while pulling from national and state sources)
- Vermont Property Transfer Tax Return database
- Multiple Listing Service (MLS) database
- Home Mortgage Disclosure Act data
- VHFA proprietary mortgage database

In addition, we examined past survey work conducted by the HPH Working Group and others, including:

- Surveys at the MHIP open houses;
- CVOEO Mobile Home Project
- The University of Vermont's Department of Community Development & Applied Economics interviews and focus group with current mobile home residents (per VHCB Jan. 2014 Progress Report)



October 2, 2014
Vermont Technical College, Randolph, VT

Appraisal Resources

Jeffrey Gephart
Residential New Construction Outreach Ambassador
Efficiency Vermont
800-893-1997
vtwise@together.net

Appraisal Institute

Green Building Resources (*from this location you can find all other Appraisal Institute links below*):
www.appraisalinstitute.org/education/education-resources/green-building-resources/

Valuation of Sustainable Buildings Professional Development Program:
www.appraisalinstitute.org/assets/1/7/Green_FAQs.pdf

Find an Appraiser (Valuation of Sustainable Buildings Professional Registries)
Residential: www.myappraisalinstitute.org/findappraiser/green_sustainability_residential.aspx
Commercial: www.myappraisalinstitute.org/findappraiser/green_sustainability_commercial.aspx

Residential Green and Energy Efficient Addendum:
www.appraisalinstitute.org/assets/1/7/Interactive820.04-ResidentialGreenandEnergyEffecientAddendum.pdf

Residential Green Valuation Tools by Sandra K. Adomatis, SRA, LEED Green Associate
<http://www.appraisalinstitute.org/residential-green-valuation-tools/>

Cost Data Addendum for High Performance Homes V2:
http://seecsolutions.com/wp-content/uploads/2013/03/EHI_Cost-Data-Addendum_03-04-13.pdf

PV Value®
<https://pvvalue.com/>

Fannie Mae Selling Guide:

www.fanniemae.com/content/guide/sel082614.pdf

Selling Guide: Fannie Mae Single Family - Published August 26, 2014, B4-1.1-03, Appraiser Selection Criteria (04/15/2014) Page 553

Unlocking the Value of an Energy Efficient Home – A Blueprint to Make Energy Efficiency Improvements Visible in the Real Estate Market:

www.elevateenergy.org/wp-content/uploads/2014/01/Unlocking_the_Value_an_Energy_Efficient_Home.pdf

Questions to ask the Appraiser about their qualifications before they come on site for the appraisal (suggested by appraiser, Sandra Adomatis, SRA, LEED Green Associate – past vice-Chair of Appraisal Institute Education Committee):

- How many hours of energy efficiency & green building education has the appraiser completed? Adomatis feels that 14 hours is appropriate based on AI's "green" courses. Unfortunately, it is unlikely that many appraisers have that many hours yet, as these courses are so new.
- What is their actual experience appraising green homes?
- Is the appraiser familiar with the AI *Addendum*?
- How will the appraiser assign value to the AI *Addendum* defined green categories: "(1) site, (2) water, (3) energy, (4) materials, (5) indoor air quality, & (6) maintenance and operation?"
- Ask if the appraiser would consider use of a present value calculation of the energy savings income stream, & if so, what are the assumptions, methodology & duration for the savings that they would use?
- Does the appraiser subscribe to the local MLS?
If no, this causes concerns about competency above & beyond energy efficiency & green building.

Complex Valuation Assignment

This Home is being built/renovated/updated to nationally recognized standards above prevailing code. It is designed and constructed with unique features and materials and with highly efficient equipment and in accordance with high efficiency standards. The Lender shall choose an Appraiser educated and knowledgeable in this type of valuation of these specialized homes.

(Source: Matt Belcher, Hibbs Homes LLC & Verdatek Solutions Inc.)

The Competency Rule

Per Uniform Standards of Professional Appraisal Practice (USPAP) an appraiser must:

- 1) be competent to perform the assignment,
- 2) acquire the necessary competency to perform the assignment, or
- 3) decline or withdraw from the assignment.

Competency requires:

- 1) The ability to properly identify the problem to be addressed, and
- 2) The knowledge & experience to complete the assignment competently, and
- 3) Recognition of, and compliance with laws and regulations that apply to the appraiser or to the assignment...includes familiarity with a specific type of property.
- 4)

Fannie Mae, Freddie Mac, & FHA say an appraiser must:

- 1) be competent to perform the assignment
OR
- 2) decline or withdraw from the assignment.

Communication Allowed Under Lending Guidelines/Dodd-Frank Act

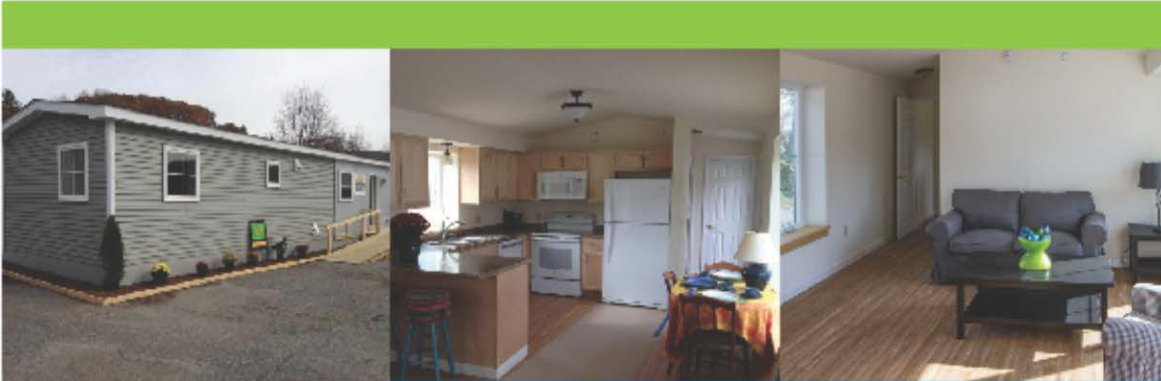
- Appraisers can talk with builders, brokers, agents, and sellers.
- Builders, brokers, agents, and sellers can provide the appraiser with documents.
- Builders, brokers, agents, and sellers can accompany appraiser on the inspection.
- Appraisers cannot be pressured by loan officer or others involved in the process to arrive at a value conclusion or to omit important facts.

Challenging an Appraisal

Challenges must:

- be in writing
- based on error of fact(s) or omission
- based on inconsistencies
- addressed with the lender directly
- addressed in a timely manner
- cannot be based on – “I don’t like the value of the appraisal!”
Do not approach the appraiser directly – you are not the appraiser’s client. The lender is.

Appendix for Qualitative Research



Finally, a home made for our New England weather. Other homes deliver low upfront costs, however, poor design and material choices lead to high maintenance and energy costs over time. By building it right the first time, this home delivers quality that lasts.

Quality & Durability

- Tightly sealed windows and doors
- Thick walls, ceilings & floors

Long-term affordability: You pay less per month

- Energy efficient systems and building materials protect you from high electricity and fuel bills
- Reduced maintenance over time means you're paying less every month

Comfort

- Properly insulated so you stay warm in the winter and cool in the summer
- Superior air quality with fresh air ventilation systems

Aesthetics:

- Natural sunlit spaces
- Open floor plan
- Large kitchen
- Plenty of storage





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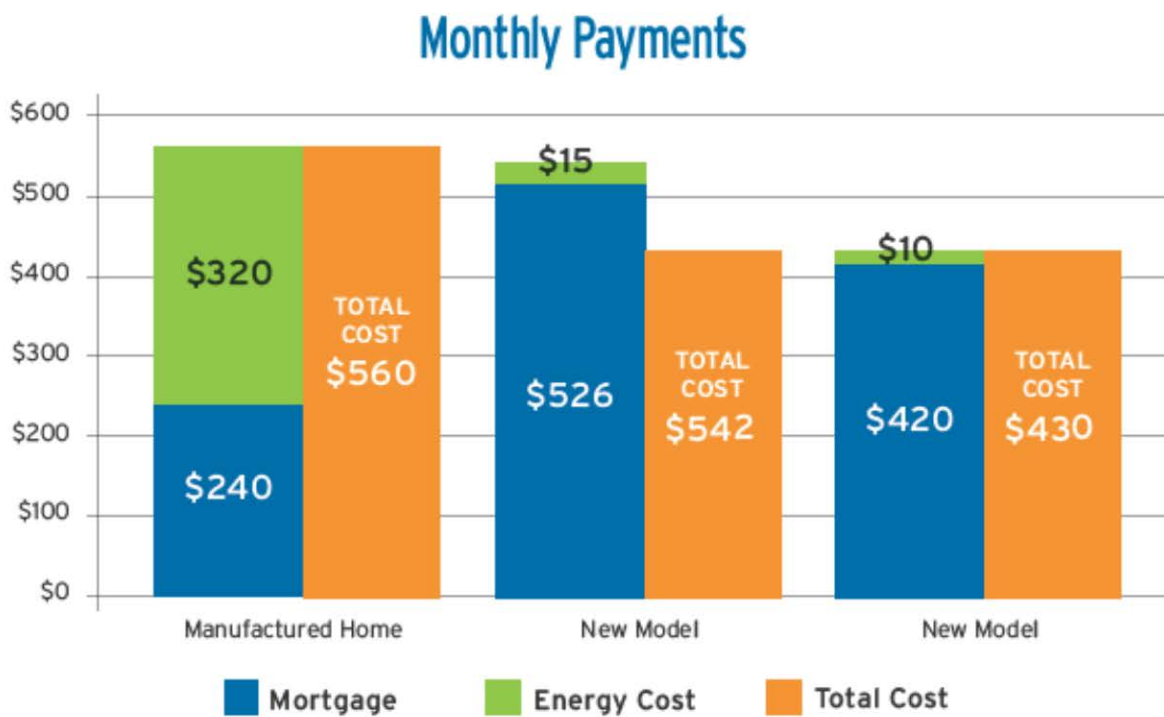
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Monthly Payments: Manufactured Home vs. New Model



Mobile Home Recycling

Recycle your old mobile home and receive financial incentives to apply towards your new mobile home model.



Lease-to-Own

Also known as “rent-to-own”, it is a lease combined with the option to buy the home within a specific time period at an agreed price. Typically:

- a) the borrower pays a small “down payment,” which is credited to the purchase price at the end of the lease period.
- b) a portion of the borrowers “rent” payments is counted toward the down payment on the home.



On Bill Financing

Qualified buyers finance a portion of their home mortgage payments through a charge on their utility bill.

One can get a lower mortgage for a higher priced home because financing is shared between the bank and the utility company. For example, instead of getting a \$40,000 bank loan (which may be challenging), you could get a \$20,000 loan through the bank and finance the remaining \$20,000 through your utility.

