

Realizing the Value:

An Appraiser-Led Analysis of the
High-Performing Home Premium
in Leading Midwest Markets

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Pamela Brookstein, MPH

Key Contributor:
Sandra K. Adomatis, SRA,
LEED Green Associate, GREEN



ELEVATE



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Reviewers

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Elevate Energy
- Natalia Gardocki,
Midwest Energy Efficiency Alliance
- Chris Haran,
Midwest Real Estate Data
- Kara Jonas,
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About Elevate Energy

Elevate Energy promotes smarter energy use for all by designing and implementing programs that reduce costs, protect people and the environment, and ensure the benefits of clean and efficient energy use reach those who need them most. Elevate Energy acts as a facilitator, both nationally and locally, aligning the process, players, and assets needed to make the value of high-performing upgrades visible in the real estate transaction.

About Sandra K. Adomatis

Sandra K Adomatis, CEO of Adomatis Appraisal Service, is an appraiser, instructor, author, and appraisal course developer. Her specialty is the valuation of “green” features in residential homes. She is the author of *“Residential Green Valuation Tools”*, published by the Appraisal Institute. It was her leadership that spearheaded the development of the Appraisal Institute Residential and Commercial Green and Energy Efficient Addendum. Her works include the Lawrence Berkeley National Laboratory studies, *“Selling into the Sun: Price Premium Analysis of a Multi-State Dataset of Solar Homes”* and *“Appraising into the Sun: A Six-state Solar Home Paired Sales Analysis”* in 2015. Adomatis also authored the 2015 study, *“What is Green Worth? Unveiling High Performance Premiums in Washington, D.C.”*

Letter from Anne Evens

I'm excited to share this analysis, *Realizing the Value: An Appraiser-Led Analysis of the High-Performing Home Premium in Leading Midwest Markets*, with you. We know that the inventory of high-performing homes is increasing across the country, as these homes have clear benefits for those who occupy them – they are comfortable, healthy, and energy efficient and they typically have lower overall energy bills.

However, the value that high-performing homes bring to the real estate transaction has, to date, been far less clear. A lack of data makes it difficult to determine whether a premium exists for these special homes at the time of refinance or resale. This appraiser-led analysis fills a gap by assessing the high-performing home market in a local context in three Midwestern areas. I'm encouraged by the clear and actionable recommendations this analysis sets forth to overcome existing challenges, as these opportunities for market transformation are relevant and replicable in other markets in the Midwest and across the U.S.

But this analysis is important for another reason: it's an early and needed step toward wealth building for low-income families. Fifty years after the federal Fair Housing Act banned racial discrimination in lending, African American and Latinx families continue to be routinely denied conventional mortgage

loans, see higher interest rates than their white counterparts, and are charged heavier refinance fees.

Buying a home is one of the few ways for low-income families to build wealth. But these families tend to own their homes for shorter periods of time than higher-income households, as they remain more susceptible to predatory loans, poor underwriting, and high penalties that raise the risk of default and foreclosure. Add to this the challenge of our current context in which unexpected events like job loss or large medical bills make things even more difficult.

At Elevate Energy, we work to connect these families to



Letter from Anne Evens

utility programs and incentives to affordably upgrade their homes, resulting in healthier indoor air quality, lower total cost of home ownership, and increased asset value at the time of sale or refinance. If we enact the recommendations set forth in this analysis, the tens of thousands of homes in low to moderate income neighborhoods that have been upgraded through various programs will be consistently valued for more money. With proper education and resources, real estate agents, as trusted messengers working in distressed communities, can become experts in listing and marketing high-performing homes, starting local cycles of market transformation across neighborhoods.

Things are difficult in 2020. Ahead, we face uncertainty and, likely, a recession which will impact the real estate market. Yet we see evidence of the value that clear documentation of high-performing home

features can provide in the form of higher appraised values so that homeowners can refinance at lower rates, reducing household budget strain and allowing more families to remain in their homes and avoid loss to foreclosure. Together, we can and must do more to ensure Smarter Energy Use for All and build the equity that has for too long been denied to African American, Latinx, and other underserved families.

Thank you for your interest in this analysis, and I look forward to more collaboration and progress with you all.

A handwritten signature in black ink that reads "Anne Evens". The signature is fluid and cursive, with a long, sweeping underline that extends to the right.

Anne Evens, Elevate Energy CEO

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Executive Summary

High-performing homes—often with key features such as air sealing and insulation, efficient heating and cooling systems, and solar panels—have clear benefits for those who occupy them. They are comfortable, healthy, and energy efficient and typically have lower overall energy bills. In some cases, these homes generate and store energy. Not surprisingly, the inventory of high-performing homes in the U.S. has grown steadily for decades and continues to rise.

Despite the obvious benefits high-performing homes provide to their occupants, the value they bring to real estate transactions has, to date, been far less clear. Addressing the questions surrounding these homes' market visibility and real estate value has the potential to shape the popularity of high-performing homes and the real estate markets they reside in. The key questions at hand are:

Is there a “green” premium associated with the sale of these special homes? If there is no premium, how can we obtain the data and information required to understand and calculate such a premium?

Studies suggest consumers will pay more for high-performing homes—if they are marketed as such—this is known as the “high-performing home premium.”¹ While there are national studies that look at large datasets from across the country to

identify a premium, real estate is local, and these findings are of less relevance and meaning to appraisers in their local market.²

Appraisers are an important stakeholder in the real estate transaction as they are charged with developing the value of homes when a purchaser or homeowner needs a mortgage. If appraisers have data and knowledge about features valued by the market, their values are more reflective of the buyers and sellers in the markets they serve.

Given this important role in the transaction, local appraiser-led studies are one clear path to help determine whether a premium exists in a more relevant context. In several regions of the U.S., recent appraiser-designed studies find that high-performing home premiums range from 2.19% to 5.8% of the home's total sale price. (See Figure 1.)

¹ Also known as the “green premium.”

² “Making the Value Visible: A Blueprint for Transforming the High-Performing Homes Market by Showcasing Clean and Efficient Energy Improvements” (“Visible Value Blueprint”) from Elevate Energy and Building Performing Association, <https://www.elevateenergy.org/wp/wp-content/uploads/Visible-Value-Blueprint-Final.pdf>

Figure 1.

Recent Appraiser-led Studies in Other (Non-Midwest) Markets

- A 2018 appraiser-led study in the Bay Area found that homes with a third-party verification have, on average, a selling price 2.19% higher than similar homes without a green label or green features (Adomatis, 2018). With the average median sales price of Bay Area homes at \$856,200, 2.19% translates into \$18,751 in additional value to the homeowner.³
- A 2017 study on homes sold in housing markets in Northern and Central Virginia performed by a team of appraisers found that the average price premium for a Pearl-certified home was more than 5% when the home was marketed as Pearl-certified (Adomatis, 2017).⁴
- A 2015 appraiser-led study in Washington, D.C. found that high-performing homes marketed with high-performing features sell for an average premium of 3.46% compared to homes without these features.⁵

Source: “Making the Value Visible: A Blueprint for Transforming the High-Performing Homes Market by Showcasing Clean and Efficient Energy Improvements” from Elevate Energy and Building Performance Association

However, to date, there has been no appraiser-led research in the Midwest. This lack of local data has made it difficult to demonstrate to Midwestern agents and appraisers that a high-performing home premium exists locally. To address this gap in the Midwest, Elevate Energy is pleased to share this first-of-its-kind, appraiser-led analysis, *Realizing the Value: An Appraiser-Led Analysis of the High-Performing Home Premium in Leading Midwest Markets*. Elevate Energy partnered with an appraiser on this analysis to find evidence of this premium and assess the visibility of high-performing home verifications and features in local Multiple Listing Services in four Midwestern metropolitan areas: Chicago, IL; Ann Arbor, MI; Grand Rapids, MI; and Minneapolis-St. Paul, MN.

Key findings include:

- Preliminary evidence suggests that properly marketed high-performing homes in the Minneapolis-St. Paul area sell for a premium;
- MLS data systems often lack data fields to display information about high-performing homes and home features; and, even when these fields do exist, they are used infrequently;
- The lack of high-performing home data in MLSs in the Michigan and Illinois markets inhibited the ability to identify a premium in the markets studied; and,
- Evidence suggests that verifications used to identify clean energy upgrades are often incorrectly recorded in MLS data fields.

This analysis recommends a number of opportunities to ensure that data and information about the benefits of high-performing homes are consistently and accurately visible in the real estate transaction.



These opportunities include:

- Offering high-quality continuing education courses by local REALTOR® and appraiser associations. These courses will help real estate agents and appraisers better articulate the features of a high-performing home through clear and consistent marketing and valuation;
- Providing marketing materials when homeowners make upgrades or certify their home; and,
- Enhancing MLS processes to ensure that any claim of a verification is documented by a qualified third party.

When homeowners make improvements to their homes, the most important aspects of home performance—safety, comfort, energy efficiency, durability, and environmental impact—are often not visible during the real estate transaction. As the Midwest markets analyzed in this paper begin to implement changes to make previously invisible high-performing home features visible, the Midwest will begin to see the consistent and fair valuation of these homes.

³ https://www.builditgreen.org/images/BIG_Green_Home_Sales_Prices_Report_FINAL_2018.pdf

⁴ <https://www.elevateenergy.org/wp/wp-content/uploads/Valuation-Study-of-Pearl-Certified-Homes.pdf>

⁵ https://www.imt.org/wp-content/uploads/2018/02/HighPerformance_Home_Valuation_Report_Sept2015.pdf

Definitions of Key Terms

- **Contributory value:** The change in the value of a property as a whole, positive or negative, resulting from the addition or deletion of a property component.⁶ The clear identification of the positive contributory value of energy efficiency features is crucial. It has the potential to drive a tremendous increase in residential energy efficiency by demonstrating to the buyer and others that improvements can pay for themselves, in part or in whole, through an incremental increase in the home's resale value.
- **An example of contributory value:** A 95% Annualized Fuel Utilization Efficiency (AFUE) furnace costs \$5,000. After one year, the house sells for \$2,750 more than a similar home without a high-performing furnace. The contributory value of the furnace is \$5,000 minus \$2,250 in loss from all forms (physical depreciation and functional obsolescence) for a contributory value of \$2,750 based on market support of paired sales.⁷
- **Green building:** The practice of creating structures and using processes that are environmentally responsible and resource-efficient throughout a building's lifecycle from siting to design, construction, operation, maintenance, renovation, and deconstruction. This practice expands and complements the classic building design concerns of economy, utility, durability, and comfort.⁸
- **Green and Energy Efficiency Addendum:** The Appraisal Institute's Residential Green and Energy Efficiency Addendum is a worksheet that provides fields that allow a home's energy efficiency features, renewable energy systems, and other high-performing features to be documented and provided to the appraiser and the lender in a standardized way.
- **High-performing home:** A high-performing home is more healthy, comfortable, safe, and resource-efficient than an average home, and/or generates and stores its own energy. High-performing homes often have a third party-issued verification.⁹
- **High-performing feature:** High-performing features contribute to making a home operate well by meeting its occupants' comfort, health, safety, resilience, water efficiency, and energy needs. There are many types of high-performing features, including high-quality insulation and air sealing, energy efficient appliances and heat pumps, smart temperature control systems, water flow controls, solar panels, and vehicle charging stations. A feature is considered high-performing if it enables a home to utilize clean

⁶ Appraisal Institute, 2015

⁷ Appraisal Institute and Visible Value Blueprint

⁸ U.S. Environmental Protection Agency

⁹ Visible Value Blueprint <https://www.elevateenergy.org/wp/wp-content/uploads/Visible-Value-Blueprint-Final.pdf>

energy and results in a less energy and water intensive home than the average home.

- **Multiple listing service (MLS):** MLSs are private databases that are created, maintained, and paid for by real estate professionals to help their clients buy and sell property.
 - **Data fields:** A place in the MLS in which to capture data about a home within an MLS listing. For instance, number of bedrooms, bathrooms, and square footage.
 - **Green data fields:** Data fields that allow agents to highlight home features like ENERGY STAR® qualified appliances, ductless mini splits, and spray foam insulation, as well as certifications like Home Performance with ENERGY STAR. One of the major benefits of populating the MLS data fields with high-performing home information is that fields are searchable by appraisers seeking comparable homes and by agents for buyers who want certain features.¹⁰
- **Real estate professionals:** This term encompasses real estate agents, real estate brokers, REALTORS®, and real estate appraisers.

- **Real estate appraisers:** It is the job of real estate appraisers to develop an unbiased professional opinion of the value of a home.
- **Third-party high-performing home verification:** Information about a high-performing home presented in a standard format by a third-party organization that maintains a formal process to ensure the quality and accuracy of the data. A third-party organization does not own the high-performing home and did not build or make improvements to it.¹¹ Types of high-performing home verifications include:
 - **Certification:** A formal indication that a home meets a set of criteria established by a third-party organization. These criteria typically require that the home meets specific standards for features that affect the home's comfort, health, energy efficiency, water efficiency, resilience, and/or energy generation and storage capacity. The U.S. Environmental Protection Agency's ENERGY STAR Certified New Homes and Southface's EarthCraft are both examples of high-performing home certifications.
 - **Label:** Information about a home's

performance relative to other homes, typically communicated by giving the home a score on a continuum that runs from poor to excellent. Most labels focus on only a single aspect of a home's performance, such as the home's relative energy consumption or energy efficiency. The U.S. Department of Energy's Home Energy Score and the Residential Energy Services Network's (RESNET) Home Energy Rating System (HERS) Index Score¹² are examples of labels.

- **Home feature verifications¹³:** Third-party verification that a home contains one or more high-performing features. These features may have been installed when the home was built or may have been added as improvements over time. A certification or label may contain home feature verifications, or a home feature verification may be a stand-alone document. The U.S. Department of Energy's Home Performance with ENERGY STAR Certificate of Completion and a Pearl Certification Report are examples of documents that contain home feature verifications.¹⁴

¹⁰ <https://www.nar.realtor/nar-doj-settlement/multiple-listing-service-mls-what-is-it>

¹¹ Ibid

¹² The HERS Index Score is like a home's MPG label, one number to tell you how energy efficient a home is. <https://www.hersindex.com/>

¹³ Note that this typology of high-performing home verifications is very close to the set of definitions laid out in the U.S. Department of Energy's Home Energy Information Accelerator Toolkit. The primary difference between the Toolkit's definitions and those provided above concern the third type of high-performing home verification, home feature verifications. The Toolkit defines this group of verifications as "verified energy improvements," a definition that doesn't capture the potential for verification of features that are not "improvements" because they were part of the home as originally built. In other words, a home that was constructed by a custom builder with attic and wall insulation considerably better than code, but not built to the standards of a third-party certification, has high-performing features that are not technically "improvements," but should be featured at time of sale through a home feature verification.

¹⁴ Visible Value Blueprint <https://www.elevateenergy.org/wp/wp-content/uploads/Visible-Value-Blueprint-Final.pdf>

Introduction

If homebuyers and their agents had a clear understanding of the benefits and features of high-performing homes, would they pay more for those homes? Would this launch a cycle of market transformation in which owners upgrade their homes not just for comfort and savings, but also because they can expect to capture the value of these improvements at the time of home sale?

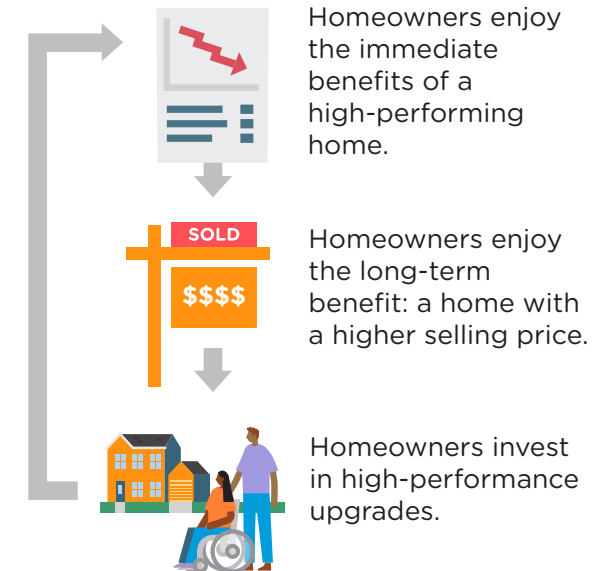
Elevate Energy and Building Performance Association's 2019 paper, "Making the Value Visible: A Blueprint for Transforming the High-Performing Homes Market by Showcasing Clean and Efficient Energy Improvements" presented actionable strategies to launch this critical cycle that will lead to market transformation (Figure 2).

An essential action step to valuing home performance in the real estate market is to first quantify the local value of high-performing homes through appraiser-led studies. This will help to make high-performing home features visible and exciting and to demonstrate the additional value these homes can command.

It is the job of real estate appraisers to develop an unbiased professional opinion of the value of a home. This appraisal is used whenever a mortgage is involved in the buying, refinancing, or selling of that home. A qualified appraiser creates a report based on a visual inspection, using recent sales of similar properties, current market trends, and aspects of the home (e.g., amenities, floor plan, square footage) to determine the property's

Figure 2.

The Cycle of Market Transformation



appraisal value.¹⁵ The appraisal is a crucial part of determining if high-performing homes and their features command a premium at the time of sale. This identification of a premium has the potential to drive a tremendous increase in residential energy efficiency by demonstrating to the buyer and other participants in the real estate transaction that these improvements can pay for themselves, in part or in whole, through an increase in the home's resale value.

Local appraiser-led studies are critical to demonstrating this value because they are grounded in the methods that appraisers use to conduct a professional analysis of a home. Specifically, appraisers use small, discrete data sets, comparing like homes within the same real estate market area. Appraisers carefully select homes that have the same attributes (for instance, number of bedrooms, age of home, and square footage). These homes are called “comparables” or “comps”. Not surprisingly, appraisers seek studies based on comparable home sales because they provide more credible results for use in the valuation process.

Market-specific appraiser-designed studies are key to demonstrate to Midwestern agents and appraisers that a high-performing home premium exists locally. However, to date, there have been no appraiser-led studies conducted in the Midwest. Understandably, because conditions are different in every real estate market, Midwest appraisers and real estate agents are not wholly convinced by studies done in other parts of the country that show the contributory value of high-performing homes ranges from 2.19% to 5.8% of the home's total sale price.¹⁶ As a first step toward addressing

this gap in the Midwest, Elevate Energy partnered with an appraiser to analyze four Midwestern metropolitan areas: Chicago, IL; Ann Arbor, MI; Grand Rapids, MI; and Minneapolis-St. Paul, MN. With the goal of moving each of these markets towards market transformation, the purpose of this analysis is to:

1. Assess the extent to which high-performing home verifications and features are visible in local MLS databases.
2. Determine if there is any evidence that a green or high-performing home premium exists.
3. Outline recommendations for energy efficiency and clean energy advocates on how to support their local real estate community in increasing accurate data collection, awareness, and visibility of high-performing home features in order to value high-performing homes appropriately and consistently.

This analysis intends to provide an assessment of the current market and emphasize the need for more localized appraiser-led research to identify and understand high-performing home premiums and build the case for further investment by homeowners in these special features. This analysis draws on a range of instruments for each market, including research, market trends, industry expertise, case studies, real estate professional surveys and interviews, and, where possible, paired-data analysis.

These instruments can sometimes be used across all of the states analyzed, and sometimes focus on just one market. The surveys with real estate professionals provide deeper insights into the trends among appraisers and agents across the three states studied. For example, a survey written by Elevate

Figure 3.

In recent years, have you noticed an increase in the interest of home buyers and sellers regarding the energy-related or high-performing features of homes?

	Illinois	Michigan	Minnesota
Yes	51%	59%	64%
No	49%	41%	36%

Illinois, n=512; Michigan, n=63; Minnesota, n=28

Figure 4.

Many market studies have found that homes that are marketed as high-performing or energy efficient sell for more money. In your opinion, is this true in your market?

	Illinois	Michigan	Minnesota
Yes	20%	22%	41%
No	63%	57%	42%
Maybe	17%	21%	27%

Illinois, n=337; Michigan, n=54; Minnesota, n=22

¹⁵ <https://www.investopedia.com/articles/pf/12/home-appraisals.asp>

¹⁶ <https://www.elevateenergy.org/wp/wp-content/uploads/Visible-Value-Blueprint-Final.pdf>

Figure 5.

How many energy efficient or high-performing homes are in your state?

	Percent of appraisers that believe there are over 5,000 high-performing homes in the state	Actual number (based on inventory of third-party verified homes in the state)*
Illinois	31%	28,174
Michigan	33%	33,522
Minnesota	33%	40,279

Illinois, n=48 ; Michigan, n=51; Minnesota, n=57

** Details can be found in the state sections below. ENERGY STAR® certificates were removed from the count to avoid the double counting that occurs between ENERGY STAR and the HERS Index Score*

Energy and emailed to real estate agents in these three markets (select areas of Illinois, Michigan, and Minnesota) included questions about the perceived interest of buyers in high-performing homes. A majority of respondents (an average of 58%) felt there was an increase in the interest of home buyers and sellers around high-performing home features. At the same time, when asked if these features lead to homes selling for a higher price, the responses were more varied. These findings (as indicated in Figures 3 and 4) support the need for more local appraisal-led research to further demonstrate and quantify the value of these high-performing improvements. A similar survey written by Elevate Energy and emailed to appraisers asked, “How many energy efficient or high-performing homes are in your state?” The highest response option was “over 5,000”. However, only a third of respondents selected this tier, even though the actual number of homes is significantly higher in each state (see Figure 5). This suggests a lack of awareness and guidance around what makes a home high-performing, which is often the result of limited or poor data and a lack of education.

The market-specific analysis completed by the research team is detailed in three sections: Illinois: Chicago Metropolitan Area; Michigan: Ann Arbor and Grand Rapids Metropolitan Areas; and Minnesota: Minneapolis-St. Paul Metropolitan Area.

Each section provides:

- Real estate market analyses including the MLS landscape and the relative ease, or difficulty, of finding local real estate market statistics.
- Catalog of utility energy efficiency programs and rebates critical to appraisers’ and real estate agents’ understanding of the potential high-performing home landscape and the types of efficiency upgrades homeowners are making.
- Information on the inventory of third-party verifications (both national and local).
- Quantitative analyses including the paired-data analysis, where feasible.
- Survey results to better understand trends among appraisers and agents in the field in each market.
- Summary of findings regarding the existence of a high-performing premium and the visibility of energy efficiency features in the MLS.

Following the three market-specific analysis sections is a discussion of the shared challenges across the markets and recommendations for solutions to overcome these obstacles to ensure the consistent and fair valuation of high-performing homes in the Midwest. The conclusion provides a summary of opportunities to ensure that the data for and benefits of high-performing homes is consistently and accurately visible in the real estate transaction.

Overview of Appraiser-Led Research



Appraiser-led research uses a distinct methodology to identify a high-performance premium. Appraisers, when developing an opinion of value for a home, take into account three components: market trends; small data sets and paired data analysis (which can be time consuming but are necessary); and data drawn from multiple listing services. Paired data studies are appraisers' most trusted method, but the other components provide important information as well. For this analysis, an attempt was made to use all three methods when possible, but due to data constraints discussed later, this was not always possible and some components were more fruitful than others.

Market Trends and Residential Appraisals

The Appraisal Institute calls market analysis a “critical step” in the appraisal process. According to the Appraisal Institute, market analysis should consider market participants' beliefs about what will happen to market conditions in the future as well as current and expected changes in supply and demand.¹⁷

Developing a fair and credible opinion of value for a home requires the appraiser to consider trends that could affect the housing market, such as local unemployment rates, housing stock availability, the average number of days homes are listed before sold, and foreclosure rates. When it is difficult to find market trends, or when an appraiser must

search through multiple, disconnected sources, this slows down the appraisal process and often results in limited information that may negatively affect the opinion.

Paired-Data Analysis

Paired-data analysis helps appraisers look at the sales of single-family homes with high-performing features and identify if high-performing home premiums were paid. Paired-data analysis (in a specific market area) can be difficult to complete as there is often limited data from which to draw conclusions, however, this method is preferred among appraisers as the results reveal a direct market reaction to a given feature.¹⁸ In contrast to paired-data analyses, a number of clean energy programs and organizations have completed pricing model studies that use large

¹⁷ <https://www.appraisalinstitute.org/assets/1/7/guide-note-12.pdf>

¹⁸ https://www.builditgreen.org/images/BIG_Green_Home_Sales_Prices_Report_FINAL_2018.pdf



If the appraiser uses sales figures from homes that do not have the same features and does not have paired-data information to support adjustments for high-performing features, the lender's underwriter may reject the appraised value (when adjusted for the high-performing features) due to the lack of similar sales. This practice may play a part in keeping the prices of homes with high-performing features equal to those of homes that have similar characteristics, but which lack energy efficiency or high-performing features.

While paired-data analysis is the most preferred method among appraisers, it is difficult to achieve when these features are not easy to identify in MLS listings, as was found to be the case from the

MLS data search. When insufficient data exists to support a strong conclusion using paired data, other methods such as statistical analysis, cost less depreciation, income approach, or studies from other areas can all help measure the value contribution of these features.

The Multiple Listing Service Landscape

All appraiser-led research begins with a search of homes in a multiple listing service. There are approximately 600 MLS organizations available across the U.S., which presents two main barriers for appraisers when searching for comparables in an MLS.

The first challenge occurs if an MLS lacks appropriate "green data fields" or if the data fields are incomplete or incorrectly filled out. This

challenges the appraiser's ability to identify homes for the paired-data analysis.

The second challenge occurs when multiple MLSs serve geographically overlapping markets or very small markets. When there are small groups of contiguous MLSs, appraisers must search multiple MLS databases to find comparable properties for paired-data analysis, as different agents may use different MLSs even if they are in the same market. Not only is this a time-consuming process, it is an expensive one; appraisers, just like agents, must pay yearly fees to access each individual MLS.

Additionally, each MLS has its own rules for accessing data and each presents that data in different ways. There is an argument to be made for consolidation of multiple listing services that serve the same geographic region. When it is difficult to find data, or when the data is inaccurate, this could result in no value being assigned to a high-performing home due to the inability to support a quantifiable adjustment for high-performing features.

For context, the vast majority of real estate agents engage with only a small fraction of the 600 MLSs in the U.S.:

- 50% of agents subscribe to 20 MLSs;
- 90% of agents transact within 150 MLSs; and,
- Nine of 10 listings are found in approximately 250 MLSs.¹⁹

In the markets studied in this paper, the number of MLS databases as compared to the number of agents varies widely. Michigan has the greatest imbalance between the number of MLSs and the number of agents with 29 MLSs and 30,678 agents (one of the higher imbalances in the country). By comparison, Minnesota has 10 MLSs and 19,802

datasets to identify how different environmental attributes affect pricing through statistical analysis. These studies may be less acceptable to appraisers because the statistical methods involved are less closely aligned with their day-to-day work than the methodology used in the paired sales studies.

Paired-data analysis requires supported adjustments for any feature difference except for the study feature in question (high-performing features, in this context). After adjustments are made for features other than high-performing features, the differences in the adjusted sales prices are compared. If the sale price of the house with high-performing features is higher than the similar house without these features, the sales price premium is attributed to the study feature.

¹⁹ <https://www.inman.com/2019/02/26/what-the-mls-landscape-will-look-like-in-2019/>

agents and Illinois has 13 MLSs and 44,339 agents (one of the more balanced in the country).²⁰

- Illinois: 13 MLSs, 44,339 agents
- Michigan: 29 MLSs, 30,678 agents
- Minnesota: 10 MLSs, 19,802 agents

The sentiment around MLS consolidation exists outside of the context of this paper. For example, the Council of Multiple Listing Services (CMLS) published a “Broker Sentiment Survey” in 2019 that showed the majority of respondents (72%) approved or strongly approved of MLS cooperation and consolidation (see Figure 6). An example of this working well occurs with MLSs in Northern

and Southern California; these two leading MLSs work together to provide broader data access to their members.²¹ Additionally, in 2019, a National Association of REALTORS’ advisory group recommended that NAR, “actively encourage consolidation and provide support for MLSs that want to join forces.”²²

Figure 6.

*What do brokers think about the MLS landscape?*²³

What do brokers think of MLS cooperation and consolidation?

72%
“approve” or
“strongly approve”

What do brokers want from their MLS?

40%
said greater cooperation or
consolidation between MLSs
is their number one priority

Responses collected via telephone interviews and online surveys from November 2018 - January 2019. Participants included respondents from Keller Williams, Redfin, the Realty Alliance, Berkshire Hathaway HomeServices and many small and regional independents.

²³ https://cdn.ymaws.com/members.councilofmls.org/resource/resmgr/files/resources/cmls_broker_sentiment_infogr.pdf

²⁰ <https://www.inman.com/2019/02/26/what-the-mls-landscape-will-look-like-in-2019/>

²¹ <https://www.nar.realtor/sites/default/files/documents/2016-State-of-Data-Sharing.pdf>

²² <https://magazine.realtor/news-and-commentary/feature/article/2019/02/the-future-of-mls-is-now>

Appraiser-Led Analyses of the High-Performing Home Premium

Illinois: Chicago Metropolitan Area



Market Overview

Illinois Real Estate Numbers at a Glance:

- Number of state-credentialed residential appraisers: 3,347
- Number of REALTOR® associations: 27
- Number of REALTOR® association members: 47,400
- Number of MLSs: 13
- Data for this study pulled from: MRED
- Number of members: Over 45,000

Let's return to the original goal of this analysis. Recall that we are trying to answer the following questions:

Is there a “green” premium associated with the sale of high-performing homes? If there is no premium, how can we obtain the data and information required to understand and calculate such a premium?

Recall also that appraisers play a critical role to help answer these questions, as their job is to form an unbiased professional opinion of the value of a home, including high-performing homes. Given this important role in the transaction, local appraiser-led research is one clear path to help determine

whether such a premium exists in a more relevant context. However, no such appraiser-led research studies exist in the Midwest. This analysis, *Realizing the Value: An Appraiser-Led Analysis of the High-Performing Home Premium in Leading Midwest Markets*, is a first step. In the following section, we attempt to find evidence of such a premium, looking at four Midwestern metropolitan areas, as a state-level analysis is less meaningful for appraisers and their day-to-day roles. We look at Chicago, IL; Ann Arbor and Grand Rapids, MI; and Minneapolis-St. Paul, MN. In each of the three Midwest markets, we assessed

the current MLS landscape, the catalog of relevant energy efficiency programs and available third-party verifications, and, where possible, conducted additional research (including paired-data analysis and input from appraisers and agents in the field). We begin with Illinois and an assessment of the Chicago metropolitan area.

MLS

The Chicago metropolitan area real estate market benefits by having one MLS provider, MRED. MRED has more than 45,000 members and serves the Chicago metropolitan area and beyond; in fact, over 90% of the REALTORS in Illinois belong to MRED. Having only one large MLS offers sellers a wider base to secure buyers and standardizes the housing data, while reducing the fees agents and appraisers pay to access the data. MRED's MLS platform has green data fields, though to date, they have been rarely used. However, in 2020, MRED will upgrade its suite of green and solar data fields to the most current, industry-standardized fields. It will be the first MLS in the Midwest to offer these advanced fields and only one of very few in the country to have them.

Market Statistics

The research team for this analysis found the process of searching for market statistics in the Chicago metro area (such as median home sales price and number of days a home was on the market) to be complicated and time consuming because the data was not available from one source. Ultimately, the research team found real estate market statistics by searching MRED market statistics, Redfin²⁴, and Data USA.

²⁴ <https://www.redfin.com/county/730/IL/DeKalb-County/filter/property-type=house>

²⁵ <https://data.census.gov/cedsci/>

Residential Energy Efficiency Programs, Policies, and Third-Party Verifications

Residential Energy Efficiency Programs: In the Chicago metropolitan area, the utility companies offer rebates and energy assessments to residential homes within their service areas. Real estate agents, appraisers, and builders should be aware of the programs offered in the markets they serve, as the upgrades are most often “invisible” in the marketing and valuation of these homes. Home buyer education on the importance of documenting and sharing this information with the next buyer, real estate agent, and appraiser is important and is often missing from these programs.

- **ComEd:** The ComEd Energy Efficiency Program offers assessments, rebates, and discounts on products to help customers save money and learn how to use energy more wisely.
- **Nicor Gas:** The Nicor Gas Energy Efficiency Program offers free assessments and rebates for homeowners. It also offers customers free water-saving kits and free weatherization kits.
- **Peoples Gas and Northshore Gas:** Through the energy efficiency program, homeowners can receive rebates on a range of energy-saving improvements to their homes. The program offers HVAC, water heater, and weatherization rebates.
- **Retrofit Chicago:** Led by the Mayor's Office, the Retrofit Chicago Residential Partnership brings together organizations seeking to advance residential energy efficiency for Chicago residents. Partners include ComEd, Peoples Gas, Community Investment Corporation, Elevate Energy, and the Chicago Bungalow Association. Through the program, Chicago residents can receive energy assessments with free energy-

saving products and installation and rebates for energy efficient appliances and other products, as well as various financing tools.

- **Weatherization Program:** Through the Illinois Department of Energy and Commerce, the Illinois Home Weatherization Assistance Program (IHWAP) helps low-income residents and households conserve fuel and reduce energy costs by making their homes and apartments more energy efficient.

Third-Party Verifications

In total, third-parties have issued over 43,000 verifications in the state of Illinois (Figure 7). The greater Chicagoland area has approximately 1.6 million single-family owner-occupied homes.²⁵ Each year, tens of thousands of these homes are upgraded with high-performing features through the area's utility programs. Accurately documenting these upgrades with existing home certifications is a best practice for ensuring that these features are not lost in the real estate transaction.

Illinois Home Performance with ENERGY STAR® was a program administered by the Midwest Energy Efficiency Alliance from 2009 to 2019. This program recognized over 11,000 Illinois homeowners that had qualifying efficiency upgrades performed on their homes with ENERGY STAR certificates of completion. The program also brought low-cost building science education to over 800 contractors and educated over 500 real estate professionals on how to market and value efficiency features in residential homes.

New to the Chicago metro area in 2020, Pearl Home Certification is a program for existing residential homes, a current gap in this market as Illinois Home Performance with ENERGY STAR has ended,

Figure 7.

Inventory of Third-Party Verifications in Illinois

Illinois Inventory of Third-Party Verifications*				
Verification Name	Certifying Organization	Type	Existing or New Construction	Number Certified
HERS Index Score	RESNET	National	Typically new	15,750
ENERGY STAR®	U.S. Environmental Protection Agency	National	New	15,010
Illinois Home Performance with ENERGY STAR	U.S. Environmental Protection Agency/U.S. Department of Energy	State	Existing	11,924
LEED	U.S. Green Building Council	National	New	500
Totals				43,184

* Please note that the HERS Index Score and ENERGY STAR® certificate numbers may be “double counted” in this table in that all ENERGY STAR certified homes are also given a HERS Index Score. Additionally, while there are other verifications in Illinois, this table represents those with 500 verifications or more.

Figure 8.

Question: *In recent years, have you noticed an increase in the interest of home buyers and sellers regarding the energy-related/high-performing features of homes?*

Answer	%
Yes	51%
No	49%

n=512

and other verifications (like a HERS Index Score) are most often applied to newly constructed homes.²⁶

Local Policy

Another important data point for appraisers and others is the existence of energy cost disclosure policies in the markets they serve. In 1987, the City of Chicago passed an ordinance that required the disclosure of gas bills when residential properties were sold or leased. In July 2013, MRED, the City of Chicago, and Elevate Energy worked together to automate the process, making it possible for agents to use a tool called [Energy](#)

[eCompliance](#) to get both gas and electricity cost data automatically uploaded in a City of Chicago MLS listing. As of 2019, 18% of the homes listed in MRED had utility costs included in the listing.

Survey Results from the Field

MRED, in partnership with Elevate Energy, sent a survey to its 45,000 members in early 2020. The research team, working with a local appraiser, sent a similar survey in May 2020 to 1,800 appraisers across the state.

Real Estate Agent Survey Results

Several key findings were identified through the survey results. Agents’ opinions on client interest in high-performing homes was split, with 51% saying they were seeing more interest in this topic (Figure 8). While more research is needed, this could be due to the markets that the agents were working in, or perhaps the questions they were asking their clients. Additionally, agents were generally unsure whether there was a high-performing home premium in their markets. It is positive, though, that 57% of agents, while they were unsure, were

²⁶ <https://pearlcertification.com/>

Figure 9.

Question: *Many market studies have found that homes that are marketed as high-performing or energy efficient sell for more money. In your opinion, is this true in your market?*

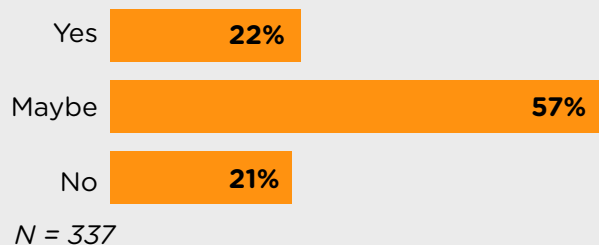


Figure 10.

Survey Comments from Illinois Real Estate Agents

- “It is not a priority for people at this time.”
- “We really need to find a way to make this a top priority for Realtors as well as consumers. I think real estate brokers should have a responsibility to educate the consumers to an extent so that the subject matter becomes a higher priority, as opposed to kitchen cabinet colors and granite countertops.”
- “I have noticed that homes in my area sell faster and have more buyer interest than others when sustainability features, energy efficiency, and health benefits are mentioned in the listing and pointed out in the home’s advertising.”

willing to entertain the idea that there may be such a premium, as opposed to the 21% that do not believe it exists (Figure 9).

Select comments from the survey can be found in Figure 10. Overall, comments signaled a split between real estate agents who thought the topic is very important to learn about and those who thought it is not relevant to buyers.

Appraiser Survey Results

When asked how many high-performing homes were in the state, responses made it clear that most appraisers are severely understating the inventory of these homes. One-third of the respondents believed there were less than 1,000 high-performing homes in Illinois; one-third believed there was somewhere between 1,000 and 5,000; and one-third believed there were more than 5,000. Research for this paper identified more than 28,000 high-performing homes (when duplicates were accounted for).

Additional results reveal good news for both the region and the areas where more education could clarify appraiser misconceptions:

- 70% of the appraisers surveyed said they were more likely to analyze high-performing features if they were provided a third-party certificate;
- Half of the appraisers surveyed reported increased interest from homebuyers and sellers regarding high-performing home features;
- Appraisers often associated “high-performing” exclusively with solar photovoltaic systems and not with energy efficiency upgrades; and,
- Many felt that high-performing homes and features were too cost-prohibitive to be financially feasible for average homebuyers.

In the comment section of the survey, some appraisers thought that more educational offerings in the area of high-performing homes was needed. Additionally, several appraisers noted that homeowners often neglected to provide documentation of upgrades that would make it easier to find higher values for high-performing homes.

The survey results demonstrate the problems appraisers have with identifying high-performing homes and their features: the information is not consistently called out in the comments sections of home listings nor are agents reliably using the green data fields; and, the data appraisers need to include to back up their findings for a higher value of a home (e.g., solar system characteristics, before and after utility bills, and third-party issued verifications) are not readily available. Moving forward, real estate professionals would benefit from robust education that includes information on the benefits of high-performing features, the available verifications in the market, and the utility efficiency program offerings.

Summary of Findings

The research team for this analysis was unable to assess whether high-performing features command a sales price premium in the Chicago metropolitan area because of an inability to find enough homes in the MLS that were identified and marketed as high-performing.

However, there are promising signs. First, the research team’s review of listings, pending sales, and sales suggest older homes that have good interior updates such as new kitchens, bathrooms, flooring, and energy efficient upgrades experience a short marketing time (though more research is needed). Second, the team identified a 10% home sales premium from a third-party certified home (please see “Case Study: Chicago Metro Area”). This

home, while only a singular case study, reinforces the importance of smart choices made by the homeowners, effective marketing by their real estate agent, and the decision to list the home at a higher price. Finally, the team identified an 8% price premium on LEED certified homes in a suburb of Chicago, compared to similar, code built, new construction homes. The builder of LEED homes had set the homes up for a fair valuation by providing copies of the LEED certificate, the homes' HERS Index scores, and a document detailing the list of high-performing features.

One of the goals of this analysis is to identify the visibility (or invisibility) of high-performing features in the MLS, either through real estate agents' use of green data fields or in the comments section. As stated above, there is little evidence from the MLS listings that homes have high-performing features or third-party verifications despite evidence from third-party verifications that these homes do exist.

Data Inconsistencies

The research team also found a consistent inaccuracy with HERS Index Scores reported in the MLS in the Chicago metropolitan area. The team pulled a sampling of listings that displayed a HERS Index Score and crosschecked the score with the RESNET Registry.²⁷ The scores from the registry should have matched those in the MLS listings. However, in some cases, the registry did not have scores for the homes that had been identified in listings as having scores. In other cases, MLS

listings had higher HERS Index Scores recorded than those in the RESNET Registry. Because the RESNET HERS Index Score Registry is public, agents, buyers, sellers, and appraisers can easily verify scores by searching home addresses²⁸, which is a way for these groups to confirm the validity of the scores.

MLSs can resolve the issue of incorrect data entry by requiring that verification of a score be uploaded by agents within 24 hours of entering the data in the MLS. If the proper documentation is not uploaded and/or cannot be confirmed with the third-party certifying organization, the HERS Score or other third-party verification would be removed.

The automatic population of energy efficiency data is a technology-driven solution that could ensure the accuracy of data, reduce liability concerns for agents and appraisers for using incorrect data, and ensure a home's upgrades are not lost in the transaction. MLSs already automatically populate publicly available data like property taxes and school districts through a data aggregator's service that collects and packages this data. Organizations such as Earth Advantage, Northeast Energy Efficiency Partnerships, Pearl Certification, and Pivotal Energy Solutions have each developed ways to populate specific local multiple listing services with high-performing home data. These firms act as high-performing home data aggregators, providing a single source of verified energy data, potentially from multiple sources for the real estate industry.²⁹

A note on the Redfin high-performing homes search: Redfin is a real estate brokerage that offers a public platform to search for homes listed for sale. Redfin recently added the ability to search for "green" homes in the Chicago metropolitan area. Redfin identifies listings that mention high-performing features, such as "energy efficient," "solar," and "LEED."³⁰

As of May 2020, Redfin identified 130 such "green" homes listed for sale in the Chicago area. While some of these homes may have had high-performing features (such as a tankless hot water heater) and be higher performing than other homes, almost none met the criteria of a "green building" as defined by the U.S. Environmental Protection Agency (see definition on page 9). These types of inconsistencies create issues with appraised values, public trust, and sales prices.

Key Takeaways

Despite the challenges, the Chicago metro area has many factors working in its favor. First, the region is served by one MLS that has made a commitment to upgrade its green and solar data fields to the industry's current standard. Further, the two largest REALTOR associations in the area offer a robust continuing education curriculum that includes courses on high-performing homes and residential solar. Lastly, the inventory of high-performing homes in the area continues to grow. By addressing the stated challenges, the region could be poised to become an example for other markets to emulate.

²⁷ <https://www.hersindex.com/hers-rated-home-search/>

²⁸ <https://www.hersindex.com/hers-rated-home-search/>

²⁹ <https://www.elevateenergy.org/wp/wp-content/uploads/Visible-Value-Blueprint-Final.pdf>

³⁰ <https://www.redfin.com/blog/the-top-10-neighborhoods-for-green-homes-in-2018/>

Chicago Metro Area

When the owners of a home in Oak Park, an inner-ring suburb of Chicago, decided to list their home in March 2020, they did so at the beginning of the COVID-19 stay-at-home orders. This meant that the typical things that happen when a home goes onto the market, like open houses and freely scheduled home showings, were curtailed. The owners did not know what to expect.

The owners of this 1936 bungalow had invested in many energy efficiency upgrades, including a high efficiency HVAC system and advanced air sealing and insulation in the attic and in the walls. These improvements enabled the home to meet the criteria for a Gold Pearl Home Certificate, awarded by Pearl Home Certification. The home sellers' real estate agent was knowledgeable about the value energy efficiency upgrades and third-party certification can have in the real estate market and expressed confidence that these features would draw home buyers in. The agent listed the house at a price 10% higher than homes of similar size, location, and age because of its high-performing upgrades and third-party issued certification.

In this case, the home also “spoke for itself.” Pearl Certification provides an engaging package of marketing materials that document the home's high-performing features and their related benefits. The materials are meant to be shared by email and displayed at showings for potential homebuyers. Because this home was listed during the pandemic, this was especially important as

buyers were advised to limit their time in the house and to avoid touching things. The marketing materials were a window into the special features of the home that couldn't be ascertained from a visual inspection and limited time in the home.

The home sold in 28 days at full list price with a backup offer over the list price. The agent credits this success to the marketing material provided by Pearl that called out the high-performing features and their benefits.

The Appraisal Process

The accepted offer was subject to a conventional mortgage and that meant an appraisal was necessary. The sellers' agent requested that the lender send an appraiser with requisite knowledge to appraise a home with high-performing features, which is required by Fannie

High-Performing Home Highlights

Certification: Pearl Gold Home Certification
Features:

- Advanced insulation and air sealing in the attic and exterior walls
- Air sealing throughout the home
- High-efficiency HVAC system
- Ceiling fans in all rooms
- High efficiency appliances
- High efficiency windows



Chicago Metro Area

Mae, Freddie Mac, and HUD/FHA guidelines. The owner of the appraisal company said that this wasn't needed because high-performing homes have no additional value. However, the assigned appraiser ultimately did take into account the Pearl Home Certification and the Appraisal Institute's Residential Green and Energy Efficient Addendum (supplied by Pearl), a worksheet that provides fields that allow a home's energy efficiency features, renewable energy systems, and other high-performing features to be documented and provided to the appraiser and the lender in a standardized way. The agent believes it was those two documents that gave the appraiser a better understanding of the home's features and the confidence to assign those features the value they deserved.

Key Takeaways

What lessons can be learned from the sale of this special Oak Park, Illinois home? What steps can or should be replicated in other markets or contexts?

- **Highlight high-performing features.** Use marketing materials to present and package the benefits of high-performing features in an engaging and exciting way. People buy homes based on emotion and feelings.
- **List a high-performing home for a higher price.** Homebuyers may pay more for a high-

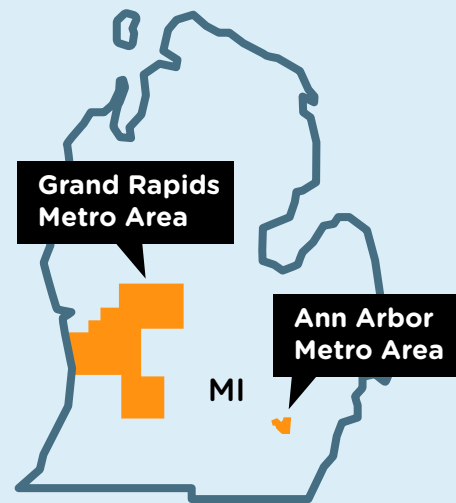


performing home than one that isn't, but only if the listing price is higher and the benefits of that home are well marketed.

- **Use the Green and Energy Efficiency Addendum.** The Appraisal Institute's Residential Green and Energy Efficiency

Addendum is a worksheet that provides fields that allow a home's energy efficiency features, renewable energy systems, and other high-performing features to be documented and provided to the appraiser and the lender in a standardized way.

Michigan: Ann Arbor and Grand Rapids Metropolitan Areas



Market Overview

Real Estate Numbers at a Glance: Michigan

- Number of state-credentialed residential appraisers: 1,592
- Number of REALTOR® associations: 40
- Number of REALTOR® association members: 33,000
- Number of MLSs: 29

Data for this study pulled from:

- Greater Regional Alliance of REALTORS (Grand Rapids area) with 3,150 members
- Ann Arbor Area Board of REALTORS with 1,050 members

MLS

Michigan has a challenging MLS landscape. The state has a relatively large number of MLSs, ranking 16 out of 50 in the number of MLSs it has compared to the number of real estate agents. Many of these MLSs cover contiguous or overlapping markets. This complicates the process for appraisers who may need to search several MLSs to find comparables for only one appraisal.

For the purposes of this appraiser-led analysis, the

MLS challenges in Michigan include:

- **Data sharing limitations:** In Michigan, a number of MLSs are not connected in a way that allows each MLS to share data (the same is also true in the other study areas, suggesting an industry-wide problem³¹). This further complicates the data flow and increases the overall cost for appraisers and agents in the market. The disparate MLSs are not consistent in format and not all are compliant with the RESO Data Dictionary³². When MLSs do not share data, appraisers and agents must

³¹ <https://www.inman.com/2019/02/26/what-the-mls-landscape-will-look-like-in-2019/>

³² <https://www.reso.org/not-certified/>

join more than one MLS if they serve areas with multiple MLSs. In Michigan, MLS dues are the same for appraisers and agents, increasing the data expense for the state-credentialed residential appraisers who may work in several counties.³³

- **Data access disadvantages:** Searches for properties that have unusual or new features (such as a solar PV system or a high-performing home certification) are further complicated by the diverse data systems in place. Appraisers often must search outside the immediate market area to identify sales that have such features. Without the ability to search several MLSs (which also do not have active fields), appraisers are at a disadvantage to support the determination of a value for these special homes. These data access limitations also add time and costs to develop an appraised value if the appraiser is required to pay annual fees for each MLS.
- **A lack of comparables:** In Michigan, the high number of existing MLSs combined with an overall lack of green data fields complicates the appraisal of high-performing properties. As stated above, when the appraiser does not have access to data to support a higher value, sales may fall through because the appraised value is less than a current offer to purchase. Often, a value ends up being based on comparables that do not have the same high-performing features of the property in question.

Market Statistics

Obtaining housing statistics for Michigan was complicated, in part, because of the non-standardized data format among MLSs and the number of REALTOR® associations and MLSs. The Michigan Association of REALTORS statistical reports provided limited data, such as the average

sale price, number of sales, and percentage of change (from the previous year). Through the National Association of REALTORS website, the Michigan major metropolitan market report did provide median sale prices, appreciation rates, unemployment rates, and building permit numbers. However, the reports did not provide the average or median days on the market, the typical sale-to-list price, or the number of months in inventory. As discussed in the introduction, these details are important for the appraiser as they try to build the full picture of the housing market landscape to develop their opinion of value for a home.

A known and persistent challenge (as is well documented in resources like *Making the Value Visible: A Blueprint for Transforming the High-Performing Homes Market by Showcasing Clean and Efficient Energy Improvements*), is that most high-performing features are invisible in the MLS, even in those MLSs with active green data fields because they are often poorly or inaccurately populated. Numerous inquiries were made to REALTORS associations in Michigan to identify MLSs that have active green data fields; the responses suggest that only two MLSs (those owned by the Greater Regional Alliance of REALTORS and the Ann Arbor Area Board of REALTORS) have limited active green data fields. Appraisers reported that they typically conduct online keyword searches within an MLS database to find listings or sales with high-performing features. This is problematic primarily because of different spellings and abbreviations for the same features. For example, “PV system,” “solar,” or “solar panels” are often used interchangeably. Searching by keyword is an inefficient and unreliable method for finding comparables.

Residential Energy Efficiency Programs, Policies, and Third-Party Verifications

Residential Energy Efficiency Programs: The following utility companies offer rebates and energy assessments to residential customers in their service area. Real estate agents, appraisers, and builders should be aware of the programs offered in the markets they serve. The large investor-owned utilities (Consumers Energy and DTE) offer online portals to access utility data with third party access approval options.

- **Consumers Energy:** Consumers Energy offers home energy analysis, instant rebates on various home products, and rebates for the installation of energy efficiency improvements. It also offers a path that helps homeowners receive a Home Performance with ENERGY STAR® certification.
- **DTE Energy:** DTE Energy offers energy efficiency programs to upgrade existing homes and incentivizes builders to build homes to a higher energy standard. DTE offers a combination of energy audit discounts and rebates for the installation of energy efficiency improvements in DTE service areas. DTE currently offers a pilot program for high efficiency, all-electric, single family new construction homes with rebates.
- **Efficiency United:** Efficiency United consists of 16 energy providers offering energy-saving solutions to residential and commercial customers across the state. The program provides assistance and rebates to customers who employ energy efficient measures. Utility companies contribute to Efficiency United, where all the programs are designed, implemented, tracked, and reported by the administrator. The programs it offers are

³³ <https://www.asc.gov/National-Registries/NationalRegistry.aspx>

Figure 11.

Inventory of Third-Party Verifications in Michigan

Michigan: Inventory of Third-Party Verifications*

Verification Name	Certifying Organization	Type	Existing or New Construction	Number Certified
ENERGY STAR®	U.S. Environmental Protection Agency	National	New	19,194
HERS Index Score	RESNET	National	Typically new	17,057
Consumers Energy Home Performance with ENERGY STAR	U.S. Environmental Protection Agency/U.S. Department of Energy	Regional	Existing	14,637
Pearl Home Certification	Pearl Certification	National	Existing and New	1,828
Total Count				52,716

* Please note that the HERS Index Score and ENERGY STAR® certificate numbers may be “double counted” in this table in that all ENERGY STAR certified homes are also given a HERS Index Score. Additionally, while there are other verifications in Illinois, this table represents those with 500 verifications or more.

Figure 12.

Question: Many market studies have found that homes that are marketed as high-performing or energy efficient sell for more money. In your opinion, is this true in your market?

Answer	%
Yes	20%
Maybe	63%
No	17%

n = 54

consistent across all the utilities in Michigan that participate in the statewide program.

- **Weatherization Program:** The Michigan Department of Health and Human Services oversees the state’s Weatherization Assistance Program (WAP). WAP is a federally funded, low-income residential energy conservation program. The program provides free home energy conservation services to low-income Michigan homeowners and renters.

Two additional innovative Michigan programs include:

- **Michigan Saves:** Michigan Saves is a nonprofit

organization that operates as a “green bank,” making affordable financing and incentives available through grants and partnerships with private sector lenders and energy providers. It also authorizes and monitors a network of contractors and provides technical assistance for customers and contractors. Michigan Saves financing is as low as 4.25% APR (at the time of publication of this analysis) and includes water efficiency and solar.

- **Holland Home Energy Retrofit Program:** The Holland Home Energy Retrofit Program is a financial incentive offered by the Holland Energy Fund to homeowners. The program assists homeowners in making comprehensive, whole-

house energy improvements to reduce energy use, increase comfort, and lower utility bills. City of Holland homeowners who invest in increasing the energy efficiency of their homes are eligible to receive a 10% rebate grant from the Holland Energy Fund through the program. Every home receives a Pearl Home Certification (285 homes have been certified to date) and works with Michigan Saves on financing options.

Third-Party Verifications

In total, third parties in the state of Michigan have issued over 52,000 residential verifications. Please see Figure 11 for more information.

Local Policy

As in the other study areas, it is helpful for appraisers and others to be aware of any energy disclosure policies in their market area. The City of Ann Arbor Office of Sustainability has hired staff and proposed programming to assist the building and rental communities through the permitting and inspection process as it relates to sustainability measures including disclosure policies. These are expected to be available in late 2020.

Survey Results from the Field

On behalf of the research team, agents, brokerages, and appraisers sent a survey to their members to gauge REALTORS' opinions on high-performing homes and energy efficiency. When asked if they thought high-performing homes sold at a premium in their local market, over 60% of agents were not sure (see Figure 12). This supports the need for additional, locally-based appraiser-led studies to determine if premiums exist, and if not, what might be inhibiting such a premium.

The Great Lakes Chapter of the Appraisal Institute and various local appraisers sent a similar survey to appraisers in Michigan. Encouragingly, 47% of appraisers believed that buyers, at least some of the time, were willing to pay more for homes with high-performing features. Additionally, 80% reported they were more willing to analyze high-performing features if they were provided a verification of upgrades from a third-party organization, which supports the importance of adding this type of information to the listing. But as noted below, agents are not consistently including this data in their listings.

Additional take-aways from the appraiser survey include:

- Only one-third (33% of respondents) reported there were more than 5,000 high-performing homes in Michigan; this means, two-thirds of respondents thought there were significantly



fewer (either 1,001 to 5,000 or less than 1,000), when, in reality, the number of homes is approximately 33,500.

- A majority of respondents agreed that high-performing features were not visible in the market.
- Appraisers had an overall lack of understanding about what makes a home high-performing, though a definition was provided. Many believed that only new construction homes can be high-performing and that condos cannot be high-performing. Many indicated through the comment section that the addition of solar is the only indicator of a high-performing home; additionally, several appraisers interviewed by the team noted “green” homes were ones with solar photovoltaic systems.

- Sixty-two percent reported that there is no known or easily available education on the topic of energy efficient or high-performing home features.

Given the general misunderstanding around what makes a home high-performing, and appraisers' responses around the lack of information about these homes in MLS listings, appraisers and agents will benefit from high-quality and localized education on this topic.

Summary of Findings

A Seller's Market: It is important to note the real estate environment in Michigan in which this research was performed. During the time the MLS data was pulled in the Michigan study areas, the two markets were quite active. It was

a seller's market, meaning inventory was limited yet prospective buyers expressed a desire to move to the area and were bidding fast and high to buy homes. Interviews with local real estate agents confirmed these markets were "hot", with homes receiving multiple offers, most above the list price.

During the time of this analysis, real estate company Redfin identified the Grand Rapids housing market as extremely competitive. Homes in Grand Rapids received on average two offers and sold in approximately 15 days. The average sale price of a home in Grand Rapids was \$161,000 last month, up 7.1% since last year. The average sale price per square foot in Grand Rapids was up 9.2% since 2018. In-demand homes were selling for about 2% above list price and went to "pending" in around five days³⁴ (compared with a more typical time on market of 30 to 60 days³⁵).

A similar situation was occurring in Ann Arbor. Local real estate agents reported the market was competitive, with homes receiving multiple offers, most above the list price. The Local Market Report³⁶, a quarterly publication put out by the National Association of REALTORS, indicated the price-to-income ratio was high by historic standards.

As such, it was difficult to pull premiums for these homes because all homes were selling for a premium. For research purposes, pulling out

premiums is easier to accomplish when buyers have time to compare homes (i.e., when it is a buyer's market).

Real estate agent interviews revealed that energy efficiency was not a top decision-making factor for buyers at the time. This is attributed to the high demand and limited supply—in these circumstances, finding a house that is affordable is the main goal for buyers. Buyers are often not considering the true cost of home ownership that exceeds the monthly mortgage payment to include costs such as monthly utility costs, maintenance, and potential health costs due to poor indoor air quality.

Lack of Green Data Fields

Also important to note is the lack of green data fields in the Michigan multiple listing services. This makes it difficult for appraisers to identify sales with high-performing features. Appraisers actively working in major market areas in Michigan (Detroit, Ann Arbor, Lansing, and Grand Rapids) indicated and confirmed that this was a challenge.

Key Takeaways

In 2019, the American Council for an Energy-Efficient Economy (ACEEE) ranked Michigan's energy policies 13th in the U.S.³⁷ ACEEE reports

that "Michigan leads by example by setting energy requirements for public buildings, benchmarking energy use, and requiring the use of energy savings performance contracts. The state offers loan and grant programs for energy efficiency investments, including PACE financing." This has set the real estate market up for a large inventory of high-performing homes. However, this paper's research team found it difficult to identify these homes, though undoubtedly a large number have been listed in MLSs and sold.

The state's real estate professionals can help spur the cycle of market transformation by properly marketing and valuing the growing number of high-performing homes in the state. Michigan has 33,000 REALTORS®, though only 90 have earned the National Association of REALTORS Green Designation³⁸. There are 2,645 stated-credentialed appraisers but only four are listed on the Appraisal Institute's Green Registry.³⁹ However, in 2019, the Michigan Energy Office sponsored an Appraisal Institute course that covered the appraising of high-performing homes and their features, an exciting development and best practice that, if continued, will contribute to market transformation. Additionally, if the Michigan MLSs add green data fields, it will be easier for real estate agents to identify these special homes and will further facilitate the appraisal process by providing a rich dataset of comparable homes.

³⁴ <https://www.noradarealestate.com/blog/grand-rapids-real-estate-market/>

³⁵ <https://www.zillow.com/sellers-guide/average-time-to-sell-a-house/>

³⁶ https://www.realtor.com/realestateandhomes-search/Ann-Arbor_MI/housing-market

³⁷ <https://www.aceee.org/state-policy/scorecard>

³⁸ NAR's Green Designation is designed for agents looking to learn about issues of energy efficiency and sustainability in real estate.

³⁹ The Registry lists the names of Designated Members, Candidates, Practicing Affiliates, Affiliates and other individuals not in one such category who have successfully completed (attended and passed the examinations) the courses in this section of the Valuation of Sustainable Buildings Professional Development Program examinations. https://ai.appraisalinstitute.org/eweb/DynamicPage.aspx?webcode=AIPDPDirectory&key=428cdb90-9814-47e4-9256-a4113c815862&pgsortby=adr_state&sortnum=6&str=10111111#src-pager-bookmark

Minnesota: Minneapolis-St. Paul Metropolitan Area



Market Overview

Real Estate Numbers at a Glance: Minnesota

- Number of state-credentialed residential appraisers: 1,054
- Number of REALTOR® associations: 17
- Number of REALTOR® association members: 20,890
- Number of MLSs in Minnesota: 8
- Data for this study pulled from: NorthstarMLS with 20,010 members

MLS

The NorthstarMLS, owned by the Regional Multiple Listing Service, is the largest MLS in Minnesota and provided much of the data for the analysis of this market. NorthstarMLS serves over 20,000 subscribers and covers a 15-county area in Minnesota and Wisconsin.⁴⁰ Research showed NorthstarMLS to be the only MLS in the state to have green data fields.

The Director of Research and Economics at the Metropolitan Association of REALTORS® reported that NorthstarMLS has two active high-performing

home fields: one called “Green Certification” and one for a HERS Index Score. This means that any research or data must be gathered manually, typically through a keyword search, which can be inaccurate and time consuming. His acknowledgement of the difficulty in searching for these properties with high-performing fields supports the idea that it is difficult for buyers and appraisers to identify these special homes.

Market Statistics

The Minnesota Association of REALTORS®’s Local Market Update January 2020⁴¹ provides a good

⁴⁰ <https://www.northstarmls.com/about-northstarmls>

⁴¹ <https://www.mnrealtor.com/viewdocument/2020-housing-report>

Figure 13.

Inventory of Minnesota Home Certification Programs

Verification Name	Certifying Organization	Type	Existing or New Construction	Number Certified
HERS Index Score	RESNET	National	Typically new	39,199
ENERGY STAR®	U.S. Environmental Protection Agency	National	New	9,487
EnergyFit™	Center for Energy and Environment	Regional	Existing	866
Total Certified				49,766

* Please note that the HERS Index Score and ENERGY STAR® certificate numbers may be “double counted” in this table in that all ENERGY STAR certified homes are also given a HERS Index Score. Additionally, while there are other verifications in Minnesota, this table represents those with 500 verifications or more.

overview of the state’s real estate market statistics. Because the statistics are easy to find and are provided in a consistent format, it makes the appraisal process much simpler and more likely to be accurate.

Residential Energy Efficiency Programs, Policies, and Third-Party Verifications

Utility Programs: In the Minneapolis-St. Paul metropolitan area, there are a few examples of utility programs that offer energy efficiency programs for residential customers. A summary of these programs follows.

- **Xcel Energy:** Xcel Energy offers a number of rebates on energy efficient appliances, lighting, and heating and cooling equipment.
- **CenterPoint Energy:** Residential customers are eligible for rebates on gas saving equipment and upgrades such as air sealing and

insulation, as well as discounts on various services and products.

- **Home Energy Squad Audit:** The Center for Energy and Environment implements the Home Energy Squad (HES)⁴² on behalf of CenterPoint and Xcel Energy, which covers the majority of the seven-county metro area and parts of outstate Minnesota. The program includes a home visit from energy consultants at the Center for Energy and Environment. The consultants install energy efficient materials such as door weather stripping, programmable thermostats, and LED light bulbs. It will also conduct an insulation inspection, measure a home for air leaks, and assess the safety of a home’s heating system and water heater. From 2013 to 2019, 30,000 homes received “Energy Fitness” scores, along with an “Energy Fitness Plan.”
- **Weatherization Assistance Program:** The Weatherization Assistance Program provides

free home energy upgrades to income-eligible homeowners and renters. The program is administered by the Minnesota Department of Commerce.

Third-Party Verifications

Third-party verification programs provide the potential to consistently document the high-performing features of a home, which makes it easier for home sellers and their real estate agents to call out a home’s special features, for home buyers to see these features, and for appraisers to account for the contributory value these features may provide. In total, third parties have issued over 49,000 verifications in the state of Minnesota (Figure 13).

Energy Fit Homes, administered by the Center for Energy and Environment (CEE), is a local certificate program designed specifically for existing homes in Minnesota. It is focused on energy efficient upgrades that are cost-effective to the homeowner. Certified homes have reached a basic standard of energy efficiency, with all improvements done to meet the health and safety standards set by Energy Fit Homes. The program certified 866 homes between 2014 and March of 2020.

Local Policy

As in the other study areas, it is helpful for appraisers and others to be aware of any energy disclosure policies in their market area. The Truth in Sale of Housing (TISH) evaluation is required in certain cities in the Twin Cities metro area. Sellers must hire a TISH inspector and receive an evaluation for their single-family residence (single family, duplex, townhomes, and first-time condo conversions) before it can be sold. In January 2020, the City of Minneapolis expanded TISH inspections to include an addendum called the Energy Disclosure Report; this addendum includes

⁴² homeenergysquad.net

information on the home's energy performance. Minneapolis TISH evaluators look at four key criteria: attic insulation, wall insulation, window efficiency, and the home's heating system. Within the Energy Disclosure Report, the TISH evaluator scores the home's energy performance on a scale of 0 to 100 based on the four criteria. While there are no required repairs related to the energy disclosure report, it provides homeowners and prospective buyers with the general energy performance of a home. The report also gives recommendations to improve a home's energy efficiency.

During the first six months of implementation, (January 2020 to July 2020), 2,700 homes were scored. Homes that received scores (along with the report) can be found in a public database.⁴³

Summary of Quantitative Analysis

Data from a national study, a local paired-data analysis, and a case study provide preliminary evidence that properly marketed high-performing homes sell for a premium in the Minneapolis-St. Paul area.

As discussed above, appraisers prefer to use a paired-data analysis to determine a feature's value within a property, such as a high-performing HVAC system or ENERGY STAR® windows. While it is the most preferred method, it is a difficult method when these features are not visible in the MLS or in the marketing of a home. When insufficient data exists to support a strong conclusion using paired data, appraisers can use an income approach or submit studies from other areas to measure the value contribution of these features. Minnesota was the only state in which sufficient data was found to do any paired-data comparisons.

Local research began with a search of NorthstarMLS data to identify home that indicated in the listing that the home had energy efficient features or a third-party certification. The second step was to do a similar search and pair those homes with ones that are comparable (for example in size, date sold, square footage, number of bathrooms) but without the added efficiency upgrades. (As a reminder, this method of comparing sales requires supported adjustments for any feature difference except for the study feature in question (energy features, in this context). After adjustments are made for features other than high-performing features, the differences in the adjusted sales prices are compared. If the sale price of the house with energy efficient or high-performing features is higher than the similar house without these features, the sales price premium is attributed to the study feature. The research team found three homes (Figure 14) that were used for this preliminary analysis.

Results

From the available data points, the research team pulled comparables and ran an analysis to find the following sales price premiums. These five pairs indicate a sales price premium that ranges from 2% to 14%.

- Sale 1 is an Energy Fit Certified home that enjoyed a 10% to 13.6% sales price premium. The premium attributed includes a solar photovoltaic system and a solar warm air system that may have attributed to the higher premium compared to pairs 4 and 5.
- Sale 5 is an Energy Fit Certified home that sold at 2.4% sales price premium.
- Sale 9 was built to ENERGY STAR standards and realized a 2.9% premium.

Because of a lack of data in the MLS, there are too few pairings to come to a definitive conclusion, but available data is promising and supports the idea that properly marketed high-performing homes sell for a premium.

Freddie Mac White Paper - Energy Efficiency: Value Added to Properties & Loan Performance⁴⁴

Freddie Mac conducted an analysis to understand the value and the loan performance associated with energy-efficient homes to support the consideration of energy efficiency in mortgage underwriting practices. The paper covered the U.S. housing market and found an overall increase in sales price for a RESNET HERS⁴⁵ rated home of 2.7% to 5%, depending on the rating.

The authors of the paper replicated the analysis at the state level for Minnesota rated homes and provided the findings for sales price premiums for HERS rated homes compared to unrated homes. Freddie Mac offers the following conclusions in the Minnesota market.

Figure 15 shows averages for Minnesota HERS scored homes compared to other homes in the state, including the breakdown for homes in the top 25% of HERS ratings (i.e., Quartile 4, the top quartile and the most energy efficient), the bottom 25% of HERS ratings (Quartile 1), and in between. Being in Quartile 4 means that the home's rating is among the top 25% of all rated homes in Minnesota. Figure 16 shows a statistical analysis of the sale price for unrated versus rated homes, and homes that were rated as more energy efficient versus less energy efficient. The analysis uses propensity score matching: for the rated versus unrated homes analysis, this technique matches rated homes with unrated homes

⁴³ mncee.org/tish

⁴⁴ Argento, Bak, Brown, *Energy Efficiency: Value Added to Properties & Loan Performance*, (Washington D.C., Freddie Mac, October 2019)

⁴⁵ The HERS Score is like a home's MPG label, one number to tell you how energy efficient a home is. <https://www.hersindex.com/>

Figure 14.

High-Performing Home Paired Data Analysis

Sale Number	Neighborhood	Sale Price	Concessions	Sale Data	Living Area Sq Ft	Bed/Bath	Basement Square Feet	Year Built	Garage	High-Performing Features and Certifications	HERS Index Score	Solar PV	Adjusted Sales Price	% Sales Price Premium
PAIR ONE														
1	Longfellow	\$400,000	\$12,000	4/6/19	1,290	Three/two	550/Fin	1921	20x	Energy Fit™ Certification*	None	3kW	\$388,000	13.40%
2	Howe	\$348,000	\$6,000	8/9/19	1,325	Three/three	390ST/Fin	1923	20x	None	None	None	\$336,000	
*Sale 1 Features: two panel solar hot air system to heat the upper level, newer windows, new high-efficiency HVAC, and 3kW PV system													\$52,000	
PAIR TWO														
1	Longfellow	\$400,000	\$12,000	4/6/19	1,290	Three/Two	550 Fin	1921	20x	Energy Fit™ Certification*	None	3kW	\$388,000	13.60%
3	Seward	\$365,500	\$0	7/8/19	1,868	Five/Two	9345/Un	1900	21x	None	None	None	\$335,135	
*Sale 1 features: two panel solar hot air system to heat the upper level, newer windows, new high-efficiency HVAC, and 3kW PV system													\$52,865	
PAIR THREE														
1	Longfellow	\$400,000	\$12,000	4/6/19	1,290	Three/Two	550/Fin	1921	20x	Energy Fit™ Certification	None	3kW	\$388,000	10.00%
4	Longfellow	\$375,000	\$0	9/5/19	1,648	Three/Three	9165/256 Fin	1950	20x	None	None	None	\$349,310	
*Sale 1 features: two panel solar hot air system to heat the upper level, newer windows, new high-efficiency HVAC, and 3kW PV system													\$38,690	
PAIR FOUR														
5	Como Park	\$255,000	\$0	8/8/19	1,072	Two/1.5	Full/Fin	1955	528 sq ft	Energy Fit™ Certificate	None	None	\$255,000	2.40%
6	Como Park	\$235,000	\$0	11/15/19	862	Two/Two	Full/Fin	1946	352 sq ft	None	None	None	\$248,820	
													\$6,180	
PAIR FIVE														
9	Creek Stream, Edina	\$1,550,000	\$0	5/9/19	3,164	Four/3.5	1102/Fin	2016	3 car	ENERGY STAR® Certification*	40	None	\$1,550,000	2.90%
10	Creek Knoll, Edina	\$1,475,000		10/25/19	3,146	Five/3.5	1100 Fin	2018	2 car	None	None	None	\$1,504,895	
*Sale 9 features: annual estimated energy savings of \$1,993/yr													\$45,105	

Figure 15.

Minnesota HERS Rated Home Sales Compared to Unrated Home Sales

	Unrated	RESNET	Higher quartiles indicate better energy efficiency rating			
			Quartile 1 (bottom 25%)	Quartile 2	Quartile 3	Quartile 4 (top 25%)
HERS Index - RESNET		54.40	60.96	54.94	52.04	48.15
Price	\$285,734	\$400,311	\$327,363	\$411,685	\$432,442	\$444,308
Square feet	2,387	2,891	2,366	3,035	3,130	3,189
Acres	0.541	0.321	0.243	0.34	0.343	0.374
Year built	1,992	2,013	2,013	2,013	2,013	2,013
Year sold	2,011	2,015	2,015	2,015	2,015	2,015
Age (at sale)	18.92	1.515	1.312	1.373	1.427	2.118
New (at sale)	0.113	0.48	0.443	0.489	0.517	0.476
Number of bedrooms	3.536	3.963	3.544	4.078	4.185	4.166
Number of bathrooms	2.719	3.147	2.839	3.208	3.308	3.389
Energy use (mbtu/yr)		136.1	122.7	143	143.3	137.4
Energy cost (\$/yr)		\$1,747	\$1,635	\$1,833	\$1,792	\$1,742
Number of observations	8,667	1,628	458	413	387	370

that are similar to other characteristics to ensure that the comparisons are reasonable and uses a similar approach to compare more energy efficient versus less energy efficient homes. Additional analysis was conducted using ordinary least squares regression, without matching, and those results are consistent with the results presented here.

As shown in column 1, this analysis found a price premium for rated homes of over 10% compared to unrated homes. The results in column 2 show that rated homes with scores above the bottom 25% receive a price premium of over 13% compared to unrated homes. However, homes with rating in the bottom 25% do not receive a price premium. This

Figure 16.

Analysis of Price Premiums

Variables	(1)	(2)	RESNET only (3)
Dependent: log (price)			
RESNET-rated (Yes=1)	0.108*** (0.035)		
Quartile 1		0.045 (0.048)	
Quartile 2		0.138*** (0.035)	0.100*** (0.037)
Quartile 3		0.133*** (0.038)	0.114*** (0.039)
Quartile 4		0.138*** (0.044)	0.158*** (0.052)
100-HERS Index			
Observations	1,729	1,729	1,443
Adjusted R-squared	0.465	0.468	0.540

The “***” signify: Control variables include square footage, acres, age of the property at sale and its square term, as well as census tract and year-quarter fixed effects. Robust standard errors in parentheses. *** p<0.01

means that homes with a HERS score of less than approximately 60 have a premium of more than 13% over unrated homes. Column 3 shows that RESNET-rated homes also have a price premium for homes with higher scores compared to homes with lower scores.

Minneapolis

Recent studies suggest that homebuyers will pay more for high-performing homes. However, this is only true when the special attributes of these homes are visible in the real estate listing and are correctly marketed by knowledgeable listing agents.

In May 2019, the owner of a high-performing home in Minneapolis began searching for a real estate agent that understood the value of her home's recently updated energy features and the home's Energy Fit™ certification (from the Center for Energy and the Environment).

The Right Real Estate Agent

The home was in the Longfellow neighborhood, where, at the time, the median sale price of homes was \$260,000 and the average number of days on the market was 37 days.⁴⁶

The first two listing agents the homeowner interviewed provided a Comparative Market Analysis⁴⁷ of the home that ranged between \$300,000 and \$320,000. The seller noticed that neither agent considered the value of the home's energy upgrades. When asked why they did not,

⁴⁶ <https://www.mplsrealtor.com/market-data/>

⁴⁷ Comparative Market Analysis (CMA); A service provided by real estate agents to guide them in establishing a listing price. They compare houses that are similar in location, size, and age to recently sold homes and ones that are currently listed for sale.

the agents reported that buyers would not be willing to pay more for these features. The third real estate agent that the home seller interviewed did understand the appeal these features would have to buyers and knew that buyers would be willing to pay for them if they understood their benefits. She marketed the home's high-performing features in the MLS and at the open house. She also listed the home at \$388,000 and within 17 days had four offers, most over list price. The seller accepted an offer at \$400,000. When compared to three other home sales similar in size and location without energy upgrades, the appraiser found a sales price premium of approximately 12% attributed to the clean energy features.

Make the Value Visible

Bottom line: Buyers do not pay for things they don't know are there. In this case, the seller and listing agent knew the true value of the home, and they made sound decisions around setting a higher list

High-Performing Home Highlights

Certification: Energy Fit™

Features:

- Solar photovoltaic system
- Solar hot air heating system
- New high-efficiency heating and cooling system
- Energy efficient windows
- Energy efficient appliances
- Metal roof
- Average Monthly Electric Bill - \$60



CASE STUDY, CONTINUED

price and marketing the features of the home that made it special.

Key Takeaways

What lessons can be learned from the sale of this special Minneapolis home? What steps can or should be replicated in other markets or contexts?

- **Make the value visible.** Clearly marketing energy features and listing a home at a higher price is crucial to achieving a higher sales price.
- **The right real estate agent is key.** Not all real estate agents have the same knowledge around high-performing homes. Home sellers may need to interview several agents to find

one who understands the true value of these special homes.

- **Homebuyers value comfort, lower energy bills, and healthier indoor quality.** Over the past decade, studies from across the U.S. consistently demonstrate that consumers will pay a high-performing home premium.

Survey Results from the Field

On behalf of the research team, Minnesota REALTORS and the Minneapolis Area REALTORS emailed an online survey to their members asking for their opinions on high-performing homes as well as the assumed opinions of homeowners and buyers toward those homes. A majority of respondents reported a growing interest in high-performing homes among their clients; responses regarding a high-performing premium were mixed, though it was encouraging to find that only 27% did not believe high-performing homes would sell for more money (Figure 17).

Other interesting written comments from agents can be found in Figure 18. The first two responses suggest that a lack of education about high-performing features remains a challenge in Minnesota; condo owners can benefit from energy efficiency upgrades and these upgrades can be both effective and cost-efficient.

Appraiser Survey Results

Appraisers are an important stakeholder in the real estate transaction as they are charged with developing the value of a home when a purchaser or

homeowner needs a mortgage. If appraisers have data and knowledge about features valued by the market, their values are more reflective of the buyers and sellers in the markets they serve. In Minnesota, there are 1,054 active appraisers with a certified residential or licensed credential. A survey asking appraisers their opinions on high-performing homes was emailed to approximately half of those appraisers by local appraisers and appraiser associations.

Figure 19 includes several appraiser comments from the survey; these are telling of the challenges in the Minnesota market. The appraisers' comments are a sampling of repeated themes from the survey. The biggest take-away is that high-performing features must be visible in the MLS for appraisers to find the appropriate comps for a paired-data analysis. This requires changes that 1) the MLS can make by offering the latest suite of industry standard green data fields, 2) agents can make by using green data fields and by using the comments section to market these special features, and 3) third party verifiers can make by ensuring homeowners receive documentation that the home they are living in has either been built

to a higher standard, or has been improved to a higher standard.

Summary of Findings

High-Performing Home Premium: The findings from Minnesota suggest that homes that have been built or improved to a higher standard, as compared with their counterparts, sell for a premium—if it is marketed correctly. Though the findings are preliminary because of a small dataset, they are promising.

- Paired-data comparisons show that homes with energy upgrades and good marketing of the energy features experience a sales price premium of 2.5% to 14%.
- This finding is supported by the results of the Freddie Mac study, *Energy Efficiency: Value Added to Properties & Loan Performance*, in which homes with HERS scores less than 60 show a sales price premium of 10% or more in the state.⁴⁸

However, it is important to note that given the number of third-party verified homes in the study areas, many more listings in the MLS could have contained verification or high-performing home

⁴⁸ While the research team cannot confirm that the 10% premium was due to enhanced marketing, it is this analysis coupled with the paired-data comparisons that tells a promising story in Minneapolis-St. Paul.

feature information. The lack of data makes it extremely difficult for appraisers to find a high-performing home premium. It also hurts home sellers who may have been able to recoup their investment on energy upgrades.

Lack of Green Data Fields and Educational Opportunities

Only one of the eight MLSs in the state has green data fields. When the fields *do* exist, they are often used infrequently. For instance, the NorthstarMLS' HERS data field was rarely populated or was incorrectly populated. Agents also have at their disposal the comments section in listings. However, the research team found very few listings that included information about a home's high-performing features. Particularly important is the inclusion of a field for the Energy Disclosure Report. The report (and accompanying score) are mandatory at the time of sale. Including this standardized information in the listing will help buyers find

the homes they want and help appraisers find comparable homes to use for the appraisal.

An investment by real estate professional associations in high-quality continuing education courses will help move the market. Currently, only five Minnesota appraisers are listed on the Appraisal Institute's Residential Green Registry.⁴⁹ Further, only 30 Minnesota agents have earned the National Association of REALTORS® Green designation.⁵⁰

Key Takeaways

The story unfolding in Minneapolis-St. Paul is an exciting one. The high-performing home premium that the research team identified is the first such result in the Midwest. Additionally, Minneapolis' updated requirement of an Energy Disclosure Report at the time of listing could create a wealth of data for home buyers and appraisers. However, the lack of green data fields in NorthstarMLS to capture this information complicates the appraisal

of high-performing homes. As explained above, when it is difficult, or impossible, for an appraiser to find comparable homes when developing an opinion of value, a sale may fall through because the appraised value is less than the buyer's offer. Additionally, a lender's underwriter can reject a higher appraised value due to lack of similar sales. This situation may play a part in stifling the fair and consistent value these homes could command if marketed properly.

In short, Minnesota has built the start of a pipeline for high-performing home data, and continues to obtain relevant data through the Energy Disclosure Report; however, there are no fields in the MLS to capture this important information. Additionally, until agents can confidently talk about the benefits of high-performing home features, buyers may not be willing to pay more. It is especially important to continue this momentum in this market as there is strong evidence of a high-performing home premium.

⁴⁹ <https://ai.appraisalinstitute.org/eweb/Dynamicpage.aspx?webcode=AIPDPDirectory&key=428cdb90-9814-47e4-9256-a4113c815862#src-pager-bookmark>

⁵⁰ <https://www.nar.realtor/education/designations-and-certifications/green>

Figure 17.

Real Estate Agent Survey Results

Question: *In recent years, have you noticed an increase in the interest of home buyers and sellers regarding the energy-related/high-performing features of homes?*

Answer	%
Yes	64%
No	36%

n=28

Question: *Many market studies have found that homes that are marketed as high-performing or energy efficient sell for more money. In your opinion, is this true in your market?*

Answer	%	Count
Yes	40.91%	9
Maybe	31.82%	7
No	27.27%	6
Total	100%	22

n=22

Figure 18.

Agent Comments from the Minnesota Survey Tool

- “I sell mostly condos so there is little that my clients can do to seek out energy efficiency before they buy or enhance it once they purchase.”
- This seems to be a niche market, for those who can spend more, they will. In many cases it seems to be a “luxury” feature though. At resale, it is then a differentiator when competing with other similar homes.”
- “I’m frustrated with our associations and MLS and the lack of momentum with green fields in many ways. 90+% of our homes are existing, and yet there is NO energy rating system field for existing homes. My research shows that Solar is not being marketed and valued correctly. Appraisers therefore don’t have comps to properly value green. Realtor education is poor. Required green CE is the only way to fix this. I feel a sense of urgency.”

Figure 19.

Appraiser Comments from the Minnesota Survey Tool

- “The issue we have is finding comparable sales that have the same features. Typically, the features are a great selling point, but the pool of available properties is so low that we can’t derive any added value from market data.”
- “I built a new home in 2016 to current MN code and it is very efficient and comfortable with good energy insulation, zoned heating, led lighting and it has been the cheapest and most comfortable home I have ever owned. I did not have to spend crazy money to get a comfort and efficiency.”
- “At the present time, there is a very limited amount of resale data to support the high cost of the energy saving techniques. Until there is a larger pool of data, appraising these types of properties will be difficult. Lenders tend to rely more on the sales comparison approach than the cost approach. The market will continue to drive the value of these homes. It is my opinion that the cost to construct these properties will not be reflected when these home sell.”
- “Until recently, I had not seen any indicators that high-performing properties sold for more in this market. In the past couple years, there seems to be more desire for these homes, but data is scant and difficult to prove “added value”. I have used some national studies to support adjustments in the past year.”
- “They are not marketed properly to sell at a premium.”

Recommendations

The challenges to identifying and capturing real estate value from the high-performing homes discussed in this analysis are, for the most part, common to all three study areas (Chicago metro area, Ann Arbor and Grand Rapids metro areas, and Minneapolis-St. Paul metro area). The following recommendations to address these challenges can serve as actionable strategies for moving all three markets toward market transformation.

Recommendations to Ensure the Fair and Consistent Valuation of High-Performing Homes

1. Local appraiser and REALTOR® associations should regularly offer education courses to their members that cover the identification, importance, and valuation of high-performing home features.
2. Energy efficiency programs and contractors should provide marketing materials to homeowners after they have made upgrades or certified the home.
3. MLSs should add industry-approved green and solar data fields.
4. Real estate agents should use the comments section (and green data fields, when available) in the MLS listing to draw attention to the verifications and high-performing upgrades made to homes.
5. MLSs and REALTOR associations should provide high-quality education on the need to add (and use) green data fields.
6. MLSs across the country should allow photos of verifications in the photo gallery.
7. Entities that issue third-party verifications should create public, searchable databases that contain this information.
8. MLS administrators should be confirming high-performing home data input by real estate agents.

Challenge: Lack of understanding of what makes a home a high-performing home.

High-performing homes are not properly marketed as such because of a lack of understanding of what makes a home high-performing. Survey data makes it clear that real estate agents and appraisers do not consistently know how to identify or define high-performing features. They also lack clarity on the benefit and value these features have on the quality of life of a home's residents, such as improved air quality. And while homeowners may indeed be willing to pay more for a healthier home, they first must know that such features exist in a given property.

- **Recommendation:** Real estate agents, appraisers, builders, and lenders need quality educational options to better articulate the features of a high-performing home through clear and consistent marketing, valuation, and financing. The courses must be offered regularly by appraiser and REALTOR associations.
- **Recommendation:** Energy efficiency programs and contractors should provide marketing materials to homeowners after they have made upgrades or certified the home. These materials should explain the multiple benefits of the upgrades. This information should be presented in a way that does not require the agent to be an expert; ready-to-use marketing materials should speak for themselves. These materials need to help potential buyers understand why this home will

provide a better living experience than a similar but average home.⁵¹ This is not to say that traditional materials, such as labels or certifications, should be eliminated, but rather that supplemental materials should be included to empower and enable the real estate community to communicate the value of high-performing homes and features.⁵²

Challenge: Lack of available or consistent data.

Real estate listings do not include sufficient, consistent, or accurate high-performing home information. This makes it difficult or impossible for appraisers to find comparable properties to determine the contributory value of high-performing home features or certifications.

- **Recommendation:** MLSs should add industry-approved green data fields. These fields allow agents to highlight features like ENERGY STAR[®] qualified appliances, ductless mini splits, and spray foam insulation, as well as certifications like Home Performance with ENERGY STAR. One of the major benefits of populating the MLS data fields with such information is that these fields are searchable. Home buyers and real estate agents can look for homes with certain energy efficient verifications or features. Further, appraisers can easily find comparable properties to develop an accurate appraised value of a high-performing home⁵³. Particularly important is to include the certification data fields that are most prevalent in the MLSs coverage area.
- **Recommendation:** Agents should use the comments section of the listing to draw attention to energy efficient upgrades made to the home.
- **Recommendation:** MLSs and REALTOR and



appraiser associations should provide high-quality education on the need to add (and use) green data fields.

- **Recommendation:** MLSs across the country should allow photos of verifications in the photo gallery. This best practice has important benefits for homebuyers, as the photo calls the verification to their attention. It also means that when an MLS shares its data with public platforms (such as Zillow), even if the platform does not have the appropriate green data field, the verification information will remain with the listing. For home sellers, this helps ensure

the value of their upgrades are visible at all points in the home selling transaction.

Challenge: Lack of a paper trail (certification documents).

Unless the homeowner has certification documentation, it is almost impossible to know if a home has received a third-party certification.

- **Recommendation:** Entities that issue third-party verifications should create public, searchable databases that contain this information. Promising national publicly searchable databases include the HERS Index

⁵¹ <https://www.elevateenergy.org/wp/wp-content/uploads/It---s-Not-the-Data-It---s-the-Marketing-Motivating-Real-Estate-Agents-to-Sell-High-Performing-Homes.pdf>

⁵² *Visible Value Blueprint*

⁵³ *Ibid*

Registry⁵⁴ and Pearl Home Certification⁵⁵; the Green Building Registry⁵⁶ is an example of a state-level public database. Motivated and knowledgeable appraisers can use these databases to search for this information. Other certificate programs exist and have this information, but often limit the availability of this data in public searches; this includes both government and utility-led program data. Without such access, there remains a risk that this important documentation is lost, especially for second sales.

Challenge: Quality control.

Inconsistent or inaccurate data occurs, often as the result of it being entered into multiple locations, manually. The research team, for example, found that independent agents often enter wrong or incomplete data into listings or other databases. In some cases, this is the fault of the agent for not confirming the quality of the data. In other cases, a lack of education or understanding may be to blame. Where this data is not known or not readily available, agents may enter a “0” or other null value to complete a field, which further obscures the potential of the data to establish value for high-performing homes and their features (or, in the case of a HERS rating, falsifies the information).

- **Recommendation:** MLS administrators should confirm third-party verification data. Administrators have the ability to go through listings (depending on resources and the size of MLS) to make sure each is done properly. For example, it is mandatory for listings to have photos of the home, yet some agents in Chicago

do not add photos. In this case, an administrator reviews the listings and ensures they are complete and that proper disclosures are attached.

An example of poor data quality: In the Ann Arbor MLS, the research team found 46 new construction home sales from 2019 whose listings included a HERS Index Score and mention of an ENERGY STAR certificate. However, when the research team crosschecked the data with the RESENT Registry, those homes were not listed in the database. The research team also found 32 active new construction listings that contained HERS scores. Those scores were also not in the registry. When asked, RESNET reported that because the addresses were not in the RESNET Registry, those scores are not subject to the quality control measures that confirmed ratings in the database would be. Inaccurately reporting this is a



liability issue for real estate agents, builders, and appraisers; this can negatively affect appraised values and can lead to a sale falling through. A best practice for MLSs is a requirement that documentation for a rating, score, or certificate be uploaded within 24 hours of posting a listing or the data field with that information is cleared.

⁵⁴ <https://www.hersindex.com/hers-rated-home-search/>

⁵⁵ https://user.pearlcertification.com/pearl_certified_homes/find/

⁵⁶ <https://us.greenbuildingregistry.com/>

Conclusion

When homeowners make improvements to their homes, the most important aspects of home performance—safety, comfort, energy efficiency, durability, and environmental impact—are often not visible during the real estate transaction. In the Midwest, this is often the result of a lack of green data fields in the MLS to display information about high-performing homes coupled with infrequent or incorrect use of the fields that do exist, including third-party certifications or verifications. As a result, the lack of high-performing home data inhibits the ability for appraisers and other stakeholders to identify and assign high-performing home premiums for these special homes.

However, as evidenced by this analysis, there are a number of opportunities to address existing challenges and ensure that the data for and benefits of high-performing homes are consistently and accurately visible in Midwest real estate transactions. These include:

- The consistent offering of high-quality continuing education courses by local REALTOR and appraiser associations; these courses will help real estate agents and appraisers better articulate the features of a high-performing home through clear and consistent marketing and valuation.
- The creation of public, searchable databases that contain verification and upgrade information.
- Improved MLS procedures to ensure any claim of a verification is documented by a third party.

Beyond implementing these changes, additional appraiser-led research is needed to identify and demonstrate the high-performing premium, in

local contexts. Further, energy efficiency and clean energy advocates can play a role to support their local real estate community in increasing accurate data collection, awareness, and visibility of high-performing home features in order to value high-performing homes appropriately and consistently. As more findings are uncovered and the markets studied take the needed measures to make the typically invisible high-performing home features visible, the Midwest will see the consistent and fair valuation of these special homes.

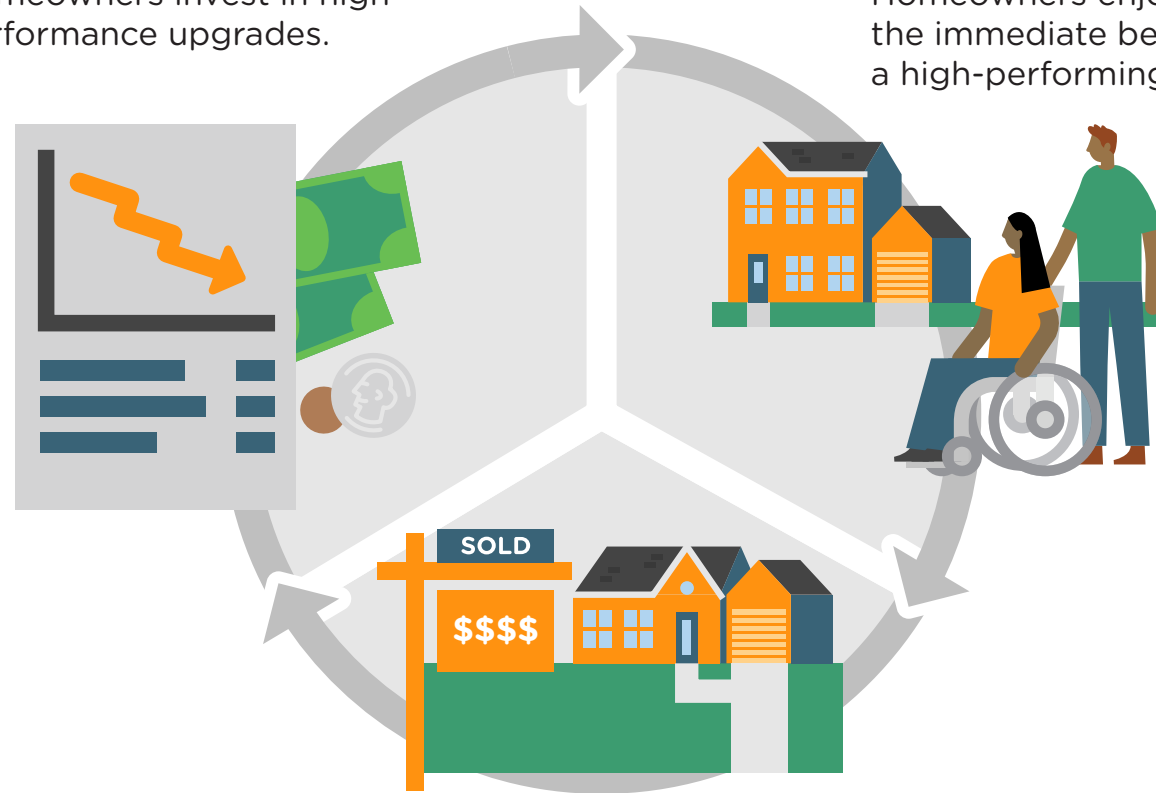
Lastly, the seminal report, *Making the Value Visible: A Blueprint for Transforming the High-Performing Homes Market by Showcasing Clean and Efficient Energy Improvements*, laid the foundation to make high-performing homes visible in the real estate transaction. This analysis was a next step, to find evidence of a high-performing premium and assess the visibility of high-performing home verifications and features in local multiple listing services in four Midwestern metropolitan areas: Chicago, IL; Ann

Arbor and Grand Rapids, MI; and Minneapolis-St. Paul, MN. There is more to be done. The findings and recommendations for the three market areas are relevant and replicable in other markets in the Midwest and beyond. While real estate is indeed local, high-performing home professionals and the real estate community need to continue to collaborate, both locally and at a national level. A focused effort, coupled with education, will accelerate the reality of an improved real estate transaction for existing high-performing homes. This sets in motion the virtuous cycle of market transformation in which owners upgrade their homes not just for comfort and savings, but also because they can expect to capture the value of these improvements at the time of home sale.

The Cycle of Market Transformation

Homeowners invest in high-performance upgrades.

Homeowners enjoy the immediate benefits of a high-performing home.



Homeowners enjoy the long-term benefit: a home with a higher selling price.