

The Challenges of Valuing Green

by Sandra K. Adomatis, SRA

Money, furniture, cleaning products, and buildings are just a few of the things that may be classified as “green.” But if the green label can apply to so many different things, is your definition of the term likely to be the same as your neighbor’s? When applied to houses, *green* takes on a variety of meanings, and this creates difficulty in the marketplace. Even the different organizations that certify buildings as green for the benefit of property owners and other market participants use a variety of definitions for the term. However, all of these definitions usually point toward the same six elements of green building:

- Site
- Water efficiency
- Energy efficiency
- Indoor air quality
- Materials
- Operations and maintenance

If everyone’s definition of *green building* included these six elements of green building, we would have less confusion and most likely an increased market acceptance of the concept.

The following definition of *green building* from the US Environmental Protection Agency (www.epa.gov/greenbuilding/pubs/about.htm) will be used for the purposes of this discussion:

green building. The practice of creating structures and using processes that are environmentally responsible and resource-efficient throughout a building’s life-cycle from siting to design, construction, operation, maintenance, renovation, and deconstruction. This practice expands and complements the classical building design concerns of economy, utility, durability, and comfort. Green building is also known as sustainable or high-performance building.

After eight years of studying green building and dealing with client’s numerous interpretations of that term, I have come to the conclusion that *high-performance* is a better term to use to describe green building technology. The use of the term *high-performance* does not allow for as much misunderstanding as the use of the term *green*. A house described as *high-performance* would

ABSTRACT

Appraisers do not determine value. Rather the market determines the prices paid for properties and appraisers develop values based on those reported market prices. This article discusses the challenges appraisers face in valuing high-performance houses when there is a lack of market data and when the available data is imprecise.

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obviously perform at a higher level than a house built to traditional minimum specifications and capacities, whereas a house described as *green* would be subject to broad interpretation and misinterpretation.

The definition of *green*, however, is just a starting point for discussing high-performance residences. Even if a property has met the definition of *green* and has a third-party certification to back up that claim, the appraiser must still determine exactly how green the property is. The specific “shade of green” of a property is related to its green rating or score established by the certifying organization. A rating near the top of the range of available points would reflect a “dark shade” of green and may indicate that the property cost more to build because of its additional features. A lower score would indicate a “lighter shade” of green. With more than 100 rating organizations in the United States using different rating methods and system names, comparing the ratings is next to impossible. Appraisers should become familiar with the green rating organizations that are most prevalent in their area. Most organizations provide information on their ratings system or at least contact information on their websites. The diversity of rating organizations is one of the major problems appraisers encounter when trying to compare shades of green in a meaningful way during the valuation process. Standardization of the green ratings would allow buyers and sellers to make better-informed decisions and would simplify the valuation process. However, it is unlikely that one rating organization will evolve and emerge from the competing alternatives given the investment each organization has already made in its own rating system. Compounding the process of valuing the shades of green is the difficulty appraisers experience in finding information about green features in the databases they currently use. Appraisers most often refer to local multiple listing services (MLS) when conducting residential appraisals. Unfortunately, the green fields in MLS databases are not being populated completely or correctly, and the shade of green is not a standard searchable field in most systems.

Market Data Problems

Analysis of market data in some areas may reveal that the market is willing to pay a premium for particular

green labels, such as a LEED certification. However, appraisers must measure each market carefully to develop credible values for green buildings, and measuring the market requires good databases with green fields that are accurately populated.

It bears repeating that appraisers do not determine value. Rather, the market determines the prices paid for properties, and appraisers develop values based on those reported market prices. The major problem in valuing high-performance houses derives directly from the appraiser’s dependence on the market; a lack of data means a lack of support for the value contributions of green attributes. Databases are years behind the green building movement, especially considering that green building has actually been around in its modern form since the 1970s. Multiple listing services are making great strides in adding green fields to their databases. The Green MLS Tool Kit (www.greenthemls.org) is one real estate industry collaborative project dedicated to this goal. Also, MLS organizations owned and operated by local Realtor associations were mandated to comply with the Real Estate Transaction Standards (RETS) by June 2009 and to keep current with the standard’s new versions by implementing new releases of RETS within one year of ratification.¹ However, there are between 10 and 15 different MLS software programs that serve MLS databases for various local Realtor associations. As of July 2013, 185 out of 850 MLS databases had searchable green data fields, according to Kristen Short, managing director of the green designation program of the National Association of Realtors (NAR). This association does not control the software system or fields used by each individual local association. However, until the NAR begins to monitor compliance, it may be years before nationwide compliance is implemented.

MLS data fields are intended to provide a basic description, but their primary purpose is for marketing. In many cases, term usage is not consistent from one listing to another. Appraisers and prospective buyers should perform their own due diligence. This challenge is more acute when it comes to properties that are built to sustainability standards. The use of the word *green* has marketing value, but it can be misleading if not outright

1. National Association of Realtors, 2014 *Handbook on Multiple Listing Policy*, Operational Issues, Section 12: Real Estate Transaction Standards (RETS), <http://www.realtor.org/sites/default/files/publications/2014/Policy/2014-MLS-Handbook.pdf>.

inaccurate without a standard set of definitions or instructions provided by the listing agency.

“Apples and Oranges” Comparisons

Using existing databases in green valuation assignments presents many difficulties. For example, consider the case of an appraiser who searches the local MLS for all sales of green houses that sold within 12 months in one county. This search results in 30 sales identified as green. However, after the appraiser performed more research, she determined that only one out of these 30 sales was actually a green home.

Consider what might happen when this appraiser, who most likely has only one or two days to visit a site and write an appraisal report, searches the MLS and does not verify those 30 sales with the parties involved in the transactions. (Keep in mind that using an MLS is considered to be using a source and not verifying data.) Because sales that are not green are inaccurately listed as “comparables” in the MLS database, no premium would be attributed for any elements of green construction.

Why is no value attributed to green houses in this case? It may be because the sales were not green properties but the appraiser assumed they were green based on their MLS listings. The appraiser might incorrectly assume that she is making an “apples to apples” comparison when comparing a subject property that she has confirmed is green at the site visit to comparable properties that are supposedly green based on the MLS data. Until green data in MLS databases is more reliable, appraisers will need more than just a couple of days to appropriately research data for a green valuation. The extended amount of time needed to research and develop a supported opinion of value deserves a higher appraisal fee, which usually is not awarded. A complex appraisal assignment deserves a competent appraiser, a sufficient amount of time for research and development, and a fee commensurate with the time involved in the assignment. In most cases, appraisers are not receiving sufficient fees to do the research necessary to value high-performance houses.

When appraisers interview sales agents, the two parties often speak two different languages and the truth does not emerge. In the verification process, appraisers must start with the basics and explain what they mean by *green*. If the agent and the appraiser define this term differently,

misinformation usually results. Too often, data input is incorrect and negatively affects the valuation of high-performance houses.

Why would an agent list a property as green in the MLS when it is not? Interviews I have conducted have revealed the following reasons:

- Lack of green knowledge on the agent’s part
- Misrepresentation of green on the seller’s part
- An effort to draw as many potential buyers as possible by checking boxes for as many features as possible in the listing
- Inadequate documentation required by MLS boards before allowing the green boxes to be checked
- Inadequate penalties imposed by MLS boards for improperly representing a property as green

An MLS board that includes appraisers in the process of developing searchable green data fields should ensure that the system includes appropriate data fields for developing value. Although the main purpose of the MLS is marketing, it has an extremely important role in documenting value as well. Engaging appraisers in the discussion of searchable fields will benefit all property types and the public.

Markets without Green Sales Data

Sales of residences with green features are a new occurrence in many markets. What should an appraiser do when working in a market that lacks green comparable sales? Many practitioners have been asking this question, and the answers vary widely. Some underwriters suggest that limited or no green sales indicate that green features have no value. However, this argument cannot be applied to similar situations, such as the market standard changing from residences with two-car garages to those with three-car garages. The same underwriters who now insist on paired sales to accept an energy-efficiency or green adjustment did not question a garage adjustment based on cost alone before sales of houses with three-car garages could be found in the market.

Appraisers report that representatives of institutions ordering appraisals for lending purposes have often told them to ignore green features and appraise green properties as if they were traditionally built. This would mean that the appraiser would not have to describe or value green features, and thus sales data would not be a problem. However, an appraiser who follows this advice would not

be in compliance with the Uniform Standards of Professional Appraisal Practice (USPAP).

Following this type of direction would result in a misleading appraisal report that does not reflect the true physical and economic characteristics of the property, as referenced in Standards Rule 1-2 of the 2014-2015 edition of USPAP. But what is an appraiser to do when the client provides such instructions? Declining the assignment is always an option, and in some cases it may be the best response.

The Appraisal Practices Board (APB) of the Appraisal Foundation issued a first exposure draft of a valuation advisory titled *Valuation of Green Building: Background and Core Competency* in 2013. This advisory clearly addresses several potential issues that relate to the valuation of green buildings:

- Assigning value, or no value, to green components without market support
- Finding market support for influences on value, the difficulties encountered when using currently available database information, and the importance of culling green features from imperfect data
- Overlooking green features, which may happen if the appraiser is not aware of the right features to look for and the right questions to ask
- Using inappropriate adjustments that are not supported by paired-sales rent analysis, market interviews, secondary data, or third-party research

This advisory document also indicates that appraisers should consider energy savings from energy-efficiency upgrades in the valuation process and should conduct adequate market research to support the use of gross rent multipliers, discounted cash flow, or similar income-based valuation techniques.²

Private Databases

Many of the green certifying organizations have databases of all the properties they have rated, but most of those organizations consider this information to be private and not for public use. This makes it very hard for an appraiser to determine the rating for a sale listed in the MLS as green that does not have a “green score” or “shade” of green indicated. Perhaps the score or shade of green has not been addressed in some MLS systems as a searchable field because, with so many different

green rating systems available, software developers have difficulty finding a data field that would work for all green programs. Attaching the green certification and score sheet to the MLS listing is one way to address the detail needed by appraisers. Some examples of databases that are not available for public use include most green rating organizations and the US Green Building Council’s (LEED) green rating databases, and the US Environmental Protection Agency (Energy Star) and Department of Energy’s databases. Recently, the Residential Energy Services Network’s database of houses with HERS Index ratings was opened to the public but the HERS Index and date rated is only searchable if you have a specific address. Home Innovation Research Labs (NGBS) and Florida Green Building Coalition has a searchable database open to the public.

Finally, none of these databases are designed to interact with each other. Imagine how much money is spent on proprietary databases that could be extremely helpful to the real estate industry but are not accessible or capable of interacting with other similar databases.

Other Market Data Problems

The lack of information readily available to appraisers will continue to be a problem for years to come. Property assessors do not usually document green ratings and often do not detail solar photovoltaic (PV) systems. If building permits are required for solar PV systems, the permit documents and data might have details that could be accessed by appraisers.

How the Different Shades of Green Affect Value

Why should an appraiser care about shades of green? To get an idea of the answer to this question, consider the answer you would get if you were to ask a builder if it costs more to build a structure rated the darkest shade of green as compared to a structure with a lighter shade rating. Marshall and Swift/Boeckh’s 2013 *Residential Cost Handbook* reports that the additional cost to build green instead of code ranges from 3% to 20%. This range is so wide because the shade of green is a determining factor.

If a structure costs more to build, the seller usually expects to sell it at a higher price. That often means that an appraisal is required. To develop the

2. Valuation of Green Buildings: Background and Core Competency, first exposure draft (Washington, DC: Appraisal Practices Board of The Appraisal Foundation, 2013).

value of a home built to the darkest shade of green, appraisers need either sales of properties that are the same shade or data to support an adjustment for the different shades of green. This is where the problem lies, since most databases do not provide details such as the specific green rating.

Consider the additional work required of an appraiser when the shade of green is ignored in the readily available data. For example, an MLS search revealed 217 green house sales in one planned-unit development in 2012. This development is a green community with a green education center for the public. After downloading additional data to determine the shades of green that were in play, the appraiser discovered that the investigation would not be possible without major research. The MLS showed that the homes in the development were green-certified, but no ratings were provided. A search of the database of the local certifying organizations revealed only one property rating out of the 217 sales. Interviewing the team in the development's sales office (who were not sales agents) did not provide any results. Their response was that their houses had various shades of green, and they could not understand why the shade would be important. When asked if the sale prices were different based on the shade of green, they readily agreed that they were. However, even for this large number of green houses, there was insufficient data to develop a value opinion of the shades of green. While sales may be available, appraisers are severely handicapped by the limitations of databases and reporting methods.

Table 1 lists the major factors that may influence sale prices and value opinions of high-performance properties. This list is not all-inclusive and only addresses features that may be attributed to high-performance houses. How many of these features are found on Form 1004 and used for mortgage lending purposes by government-sponsored entities such as Fannie Mae and Freddie Mac? Only the roof material is shown on Form 1004. Therefore, the Appraisal Institute's Residential Green and Energy Efficient Addendum or a supplementary narrative description must be used with Form 1004 to communicate an appraisal that clearly describes a high-performance house.

However, the situation is not completely bleak. Some counties are aggressive in their promotion of green construction. In these rare cases, building

permit offices may have a data field to distinguish how many green permits were issued annually. This can be a good resource for documenting the green trends in the neighborhood section of an appraisal report.

Table 1 High-Performance Property Features That May Affect Value

Shade of green or label
- Formally certified or no certification
Energy features/HERS Index rating
- Solar
- Wind
- Geothermal
- Other renewables
- Insulation type
Materials used
- Metal roof or asphalt shingle
Water-efficient features
- Cistern
- Gray water reuse system

Possible Solutions

Market participants clearly need to understand the various shades of green. If buyers are "colorblind" and the shades of green do not matter to them, values will be equal for all shades of green regardless of the cost. Builders and green-certifying organizations need to educate consumers on green features so that they can understand the differences between the shades of green. Real estate agents must also be educated on the various shades of green and what the differences mean to value or price paid. How can an agent convince a buyer that a green house has more value than a code-built house if the agent doesn't know the difference?

Taking a proactive approach to how data is stored is extremely important and unfortunately absent from today's market. Green-certifying organizations must open their databases to real estate professionals or connect them to public databases. If more data is made available, competent appraisers will be able to gather the information they need to provide credible value opinions of green versus non-green homes.

If your local MLS does not include sufficient green fields, it is important to communicate the reasons for implementing green fields to the local MLS board members who make the decisions about software and data fields. Appraisers can provide valuable tips for making data fields more user friendly for developing data searches.

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Web Connections

Internet resources suggested by the Y. T. and Louise Lee Lum Library

Appraisal Institute—Green Building Resources

<http://www.appraisalinstitute.org/education/education-resources/green-building-resources/>

Energy Star

—Buildings and Plants

<http://www.energystar.gov/buildings?s=mega>

—New Homes

http://www.energystar.gov/index.cfm?c=new_homes.hm_index&s=mega

National Association of Home Builders—Green Development

http://www.nahb.org/reference_list.aspx?sectionID=1801

National Association of Realtors

—Green Industry Articles

<http://www.greenresourcecouncil.org/green-resources/green-industry-articles>

—The Green MLS Tool Kit

<http://www.greenthemls.org/>

Residential Energy Services Network—Understanding the HERS Index

<http://www.hersindex.com/understanding>

US Energy Information Administration—Consumption and Efficiency

<http://www.eia.gov/consumption>

US Green Building Council—LEED

<http://www.usgbc.org/leed>