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National Green Building Investment Underwriting Standards

Residential Buildings
Version 2.2
April 2011

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September 2, 2008

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NATIONAL GREEN BUILDING INVESTMENT UNDERWRITING STANDARDS©

Applying Certified Buildings to Residential Real Estate Underwriting, Financing, and Appraisal Methods

Version 2.2 – April 2011

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Capital Markets Partnership
1511 Wisconsin Avenue, NW
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202-338-3131

ACKNOWLEDGEMENTS

The Capital Markets Partnership (Partnership) (CMP) is a collaboration of financial institutions, investors, investment banks, real estate investors, governments, NGO's, countries and other interested parties. A full list of Partnership members is available in Section 17.0.

CMP is a Coalition of Market Transformation to Sustainability (MTS), a nonprofit public charity and an American National Standards Institute Accredited Standards Developer.

The national Green Building Underwriting Standards© were developed and approved by the Consensus Green Building Underwriting Committee. The Committee has exclusive jurisdiction for the development, approval, interpretation and revision of the Standards and is led by the following Officers:

- **Johanna Partin**, Climate Change Director, Office of San Francisco Mayor Lee, and US Conference of Mayors
- **Steve Hoffmann**, President, Hoffmann & Associates
- **Rich Pietrafesa**, Managing Director, Destiny USA
- **Tomek Rondio**, CEO, MortgageGreen, Inc.
- **Michael Schneider**, AIA, NCARB, LEED AP, Vice President, Marx/Okubo Associates, Inc.
- **Mario Silvestri**, MAI, CCIM, CTA, Vice President, Wells Fargo Wachovia
- **Ken Willis**, Vice President and Director, Federal Home Loan Bank Boston
- **Dan Winters**, Managing Principal, Evolution Partners

We express our great appreciation to the Officers, especially Dan Winters, and all Committee Members for their exceptional work in developing and approving these National Consensus EMERGENCY Standards.

A companion Green Building Commercial Underwriting Standard ("Commercial Standard") which adopted this Standard's structure, format, and base background information is found in a separate document.

The *Green Building Industry Value Rating System©*, a report that shows the underlying market value of inherent to green buildings is available at:

http://webstore.ansi.org/RecordDetail.aspx?sku=MTS+2006%3a2

The contact information for inquiries regarding the Capital Markets Partnership is:

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Washington, DC 20007
202-338-3131

1.0 INTRODUCTION

There is significant value inherent to buildings that have achieved the US Green Building Council's Leadership in Energy and Environmental Design® ("LEED") certification, GreenPoint RATED, EPA ENERGY STAR certification, and/or Climate Neutral Certification. These national consensus standards limit risk and uncertainty especially for the capital markets. This value can be reflected in the criteria and financial underwriting processes used by appraisers, lenders, and property investors. Risk-based investment underwriting practices can evolve to effectively incorporate this value by quantifying and certifying a home's LEED rating, ENERGY STAR score, and/or Climate Neutral Certification. This certification can then be used to further quantify risk-reduction in the underwriting guidelines of financial institutions investing in residential real estate.

As example, the USGBC's LEED rating system qualifies a home on several critical areas including energy and water efficiency, indoor environmental quality, and overall location among others which is then verified through independent third-party certification. Achievement of key LEED and GreenPoint RATED points positively impacts an asset's financial attractiveness, risk profile, and market competitiveness.

These consensus standards advance transparency on real estate attributes that reflect current and future material financial value. Incorporating these attributes into the property's underwriting process is important for accurately assessing a certified home's value in comparison to non-certified properties.

This Residential Green Building Investment Underwriting Standard ("Standard") addresses the USGBC LEED, GreenPoint RATED EPA ENERGY STAR, and Climate Neutral standards with particular attention paid to breaking down key areas directly affecting financial value. In doing so, the Standard associates appropriate LEED and GreenPoint points, a home's ENERGY STAR score, and Climate Neutral aspects to residential property value. The tangible and intangible characteristics of green buildings, if transparently identified, can have a corresponding positive valuation impact on green buildings relative to comparable conventionally constructed buildings.

This Standard provides the real estate industry with a means to identify green building attributes along a sliding scale based on property characteristics identified by LEED, GreenPoint RATED, ENERGY STAR and Climate Neutral Certification. With a reliable quantification system, the real estate industry can tangibly recognize the green building "dividend" and include it in property valuation analysis, real estate equity and debt underwriting, secondary market securitizations, and portfolio analysis.

To accomplish this, the Standard associates appropriate LEED and GreenPoint points, a home's ENERGY STAR score, and Climate Neutral aspects to financial decision points for primary and secondary market participants by deriving the CMP Green Value Score™. The CMP Green Value Score is a mathematical score ranging from 25-100 based on how a home performs on the ENERGY STAR, LEED, GreenPoint, and Climate Neutral standard. The intent is to use the CMP Green Value Score as a compliment to existing underwriting processes and disclosures, informing primary and secondary market investors as to a property's or portfolio's green performance on financially tangible attributes.

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Once calculated, the CMP Green Score can be used as a risk-management tool as follows:

PRIMARY MARKET

- Loan application review
- Loan committee decision making
- Purchase and sale negotiations
- Establishing cheaper cost of capital programs

SECONDARY MARKET

I. Portfolio Analysis and Disclosure

- Pooled debt/equity investment vehicles (private / public)
- Real estate private equity portfolios
- Determining the added green building value of equity investments

II. Corporate Information Disclosure

- Private client asset / portfolio reporting
- Quarterly or annual financial reports
- Regulatory reports
- Analyst conference calls

The Standard addresses several areas of critical focus for the real estate capital markets:

1. Establishes a common definition of green building attributes appropriate for financial underwriting.
2. Constructs an analytical basis focused on transparent disclosure of tangible green building characteristics important to capital market risk assessment.
3. Creates an opportunity for capital market actors to develop a comparative data set from which to perform ongoing risk assessments and analysis.

Beyond deriving and reporting the CMP Green Value Score for asset risk analysis, portfolio risk analysis, and investor reporting, the factors identified within the Standard can be used within proforma-based spreadsheet analysis tools that seek to determine real estate financial value. The use of the Standard in detailed financial analysis projections can provide a better risk assessment through the identification of specific revenue and expense line items positively impacted by a home's green features.

Based on added value, a positive interest rate adjustment or fee advantage for certified LEED, GreenPoint RATED, ENERGY STAR or Climate Neutral homes may be applied based on the results of the Rate / Price Adjustment Matrix used by financial institutions. The percentage chosen can reflect the certified green home attributes for the home(s) in question achieving the credits identified in this Standard. For LEED and GreenPoint RATED Home Certification, the completed certified Homes Checklists should be submitted with the loan request along with written evidence from the US Green Building Council and Build It Green that the home is certified. For ENERGY STAR and Climate Neutral, copies of these certifications should also be submitted.

This Standard relies on the completed due diligence with investment banks and rating agencies documenting added green building value including the Green Building Industry Value Rating System© developed in 2006 which clearly demonstrates significant added value and risk reduction inherent to certified green buildings.

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2.0 SCOPE AND OBJECTIVE

This Standard covers all for-sale residential (non-commercial) building types including detached single family homes, manufactured housing, attached townhomes, and 1-5 story condos. Commercial buildings including multi-family residential properties are covered in the companion Commercial Green Building Investment Underwriting Standard.

The Standard's main objective is to enhance current property underwriting practices through the incorporation of existing consensus industry standards for green and/or energy-efficient residential projects – LEED, GreenPoint RATED, ENERGY STAR, Climate Neutral Certification – into the underwriting process. Green and energy-efficient certified residential properties contain numerous positive value enhancement and risk reduction aspects compared to a non-certified market peer group. The additional transparency afforded by these standards allows underwriters to reflect this value appropriately.

Adoption of this Standard will allow underwriters to appropriately assess risk and incorporate risk-reduction strategies, both of which increase industry awareness of these issues and stimulate important market signals. These market signals encourage broad real estate industry participation in energy and water efficiency management practices, thus further stimulating green building practices.

Implementation of this Standard by financiers within the capital markets will further encourage the private market to utilize the EPA ENERGY STAR tools and pursue third-party LEED, GreenPoint RATED, and Climate Neutral Certification and Scores, thereby increasing energy, water, and environmental performance and associated reporting by the real estate industry.

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1511 Wisconsin Avenue, NW
Washington, DC 20007
202-338-3131

3.0 STANDARD ADOPTION – FINANCIAL INSTITUTIONS / CAPITAL MARKETS

This Standard and its commercial counterpart are intended for adoption by institutions and individuals considering and/or underwriting financial transactions where the underlying collateral is a residential property or construction project.

Adopters of this Standard include:

1. Financial institutions / banks / thrifts / credit unions
2. Investment banks
3. Life insurance companies
4. Pension investors
5. Investment managers / fiduciaries
6. Rating agencies
7. Private market real estate investors
8. Appraisers and valuation professionals
9. Municipal assessors
10. Other relevant and interested parties

3.1 DUE DILIGENCE OVERLAY

This Standard and the CMP Green Value Score are intended to augment the existing due diligence process including:

- Phase 1 Environmental Site Assessment and environmental decisions affecting value (if required)
- Residential Home Inspection
- Appraisals
- Physical needs assessment
- Planning cost review (development)

3.2 REPORTING – UNDERWRITING EXHIBIT OR APPRAISAL ATTACHMENT

Key information must be reported and recorded as a separate due diligence Exhibit item or an attachment to an appraisal, which must be signed by a third-party. Information required for this Exhibit includes:

1. ENERGY STAR Statement of Energy Performance and/or ENERGY STAR certification
2. LEED or GreenPoint RATED Certification and scorecard (if applicable)
3. CMP Green Value Score (see Section 11.3 and Appendix)
4. Green Building Underwriting Standard worksheet (see Section 11.3 and Appendix)
5. Narrative on points awarded on the Standard worksheet (see Appendix)

3.3 USES – PRIMARY AND SECONDARY MARKET

This Standard and the resultant CMP Green Value Score is applicable to both internal decision making and external reporting to relevant parties including:

- Rating agencies
- Secondary market investors
- Private equity funds – financial / environmental reporting
- Public market corporate reports – financial / environmental reporting
- Other pertinent applications

Applications include property-specific investments in loan originations and/or property acquisitions (primary market) as well as for portfolio-level use by secondary market investors. **The CMP Green Value Score should be disclosed at all levels of property and portfolio decision making and reporting.**

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4.0 ADDITIONAL UNDERWRITING INFORMATION REQUIREMENTS

Primary market underwriters should require the following additional documented information, at minimum, when engaged in underwriting or a valuation exercise for a home:

1. EPA ENERGY STAR Score
2. Documentation of USGBC LEED or GreenPoint RATED certification (if applicable)
3. The scorecard demonstrating specific LEED or GreenPoint points achieved (if applicable)
4. Climate Neutral Certification (if applicable)

Additional information requirements may be required based on the specific LEED or GreenPoint points achieved to determine the score for the corresponding LEED or GreenPoint credit identified in this Standard.

Secondary market investors should require transparent reporting of the CMP Green Value Score at both the property level and the aggregated portfolio level.

4.1 IMPLEMENTATION – UNDERWRITING DATA REQUIREMENTS

Implementation of this Standard requires obtaining the additional property-specific due diligence items outlined in Section 4.0 above. Once these information items are received, they must be appropriately tracked and reported alongside other property-specific information.

Users of this Standard should track these additional data points by assigning new database fields to capture and store relevant asset-based information including:

1. **EPA ENERGY STAR Score**
2. **Year ENERGY STAR Score was obtained**
3. **LEED & GreenPoint Rating Level**
   - None
   - Certified
   - Silver
   - Gold
   - Platinum
4. **Year Rating was obtained**
5. **Climate Neutral Certification (Y/N)**
6. **Green Building Underwriting Standard Score (see Section 11.3)**
7. **CMP Green Value Score**

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5.0 CONSENSUS STANDARDS – BACKGROUND INFORMATION

Voluntary consensus standards have regulated the real estate industry since 1898 when the industry standardized building heating and cooling requirements to prevent exploding boilers. This led to the creation of the American National Standards Institute ("ANSI") in 1918 as the coordinator of the U.S. voluntary standards and conformity assessment system. Standards used by the real estate industry range from tensile strength of steel to the hardness of backfill, cement, and concrete among hundreds of other building requirements which have become components of municipal building codes.

These standards and similar conformity assessment programs are determined by private industry groups and act as a primary facilitator of commerce by becoming the basis of a sound national economy, reducing risk and uncertainty and adding value.[1] Further, industry-based standards are typically relied upon by government bodies over government-created standards.[2] Another consensus standard used for home developments is the Phase I Environmental Assessment report ("Phase I") which is used in standard due diligence and underwriting.

The financial markets, and in particular investors and the risk rating agencies, require comprehensive, transparent, market-driven consensus standards such as the Phase I as a basis for establishing the treatment of material risk-based attributes within the real estate industry so as to address and reduce investment risks and uncertainties.

Three consensus, transparent standards can be used to further assess risk in real estate investments. These standards include:

- USGBC LEED and Build It Green's GreenPoint RATED rating and certification systems
- EPA ENERGY STAR rating and certification
- Climate Neutral Certification

Standards equivalent to LEED, GreenPoint, ENERGY STAR and Climate Neutral Certification are acceptable for use in this underwriting standard. Equivalency decisions will be made on a case-by-case basis by the Green Building Investment Underwriting Standard Committee as a "standard interpretation". The burden of persuasion is on the applicant.

Financial institution adoption of this Underwriting Standard will substantially encourage commercial and residential green building certification to the ENERGY STAR, LEED, GreenPoint, and Climate Neutral standards thus realizing substantial economic and social benefits.

[1] Overview of the U.S. Standardization System – American National Standards Institute
http://publicaa.ansi.org/sites/apdl/Documents/News%20and%20Publications/Other%20Documents/US-Stdzn-System-FINAL.pdf

[2] Seventh Annual Report on Federal Agency Use of Industry Consensus Standards
http://www.whitehouse.gov/omb/inforeg/2003_report_voluntary_consensus.pdf

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5.1 USGBC LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN (LEED®) AND BUILD IT GREEN'S GREENPOINT RATED

The LEED–Homes and GreenPoint rating systems are applicable to residential underwriting. LEED–Homes awards up to 136 points based on seven major categories, all of which impact asset value directly and indirectly to varying degrees – a copy of these standards can be found at USGBC.org under "LEED". When underwriting LEED certified buildings, understanding the aggregate level of LEED achievement (Certified, Silver, Gold, or Platinum) is the first step.

GreenPoint RATED has been determined as equivalent to LEED under the Standard by an Equivalency Determination.

However, a property's overall certification at the LEED Silver, Gold, or even Platinum levels or comparable GreenPoint levels, is not fully sufficient from which to base valuation adjustments. As example, achieving LEED Silver certification requires a minimum achievement of 60 points which is 44% of the total LEED points available. Certain LEED points that have direct application to property underwriting may or may not exist with a specific aggregate rating. As such, it is critical to investigate the specific LEED scorecard so as to understand the exact points achieved under a particular level.

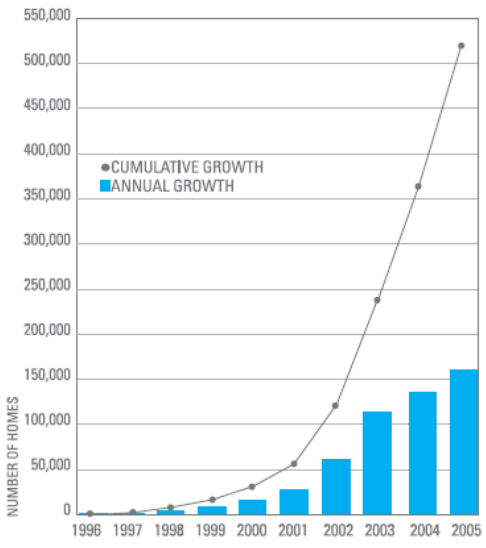
By parsing the LEED scorecard during the underwriting process, it becomes evident that numerous LEED credits have a direct, positive application to financial underwriting while other credits do not result in direct home value.

Intangible LEED and GreenPoint points adding indirect value include construction recycling programs, the use of FSC certified wood, SMaRT certified sustainable products, and open space restoration among several others. Existence of these points should be reflected in a home's intangible value which impacts an underwriter's calculation of a home's overall value potential.

5.2 EPA ENERGY STAR CERTIFICATION

ENERGY STAR certified new and existing homes provide decreased operating costs, increased market competitiveness (market value) and positively impact a homeowner's equity investment security and debt default risk. The EPA's ENERGY STAR program was first introduced in 1999 and has become the national symbol for energy efficiency in America. To date, over 800,000 ENERGY STAR homes have been certified through 5,000 home builders. Homes account for about 60% of buildings and the majority of climate change pollution attributed to the building industry.

FIG. 3. A Decade of ENERGY STAR Qualified New Homes Growth



ENERGY STAR homes are at least 15% more energy efficient than homes built to the 2004 International Residential Code (IRC). On average, ENERGY STAR certified homes use 20-30% less energy than conventional homes. Any home five (5) stories or less can earn the ENERGY STAR label if it has been verified to meet EPA's guidelines including: single family, attached, and low-rise multi-family homes; manufactured homes; systems-built homes (e.g.,

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SIP, ICF, or modular construction); log homes, concrete homes; and existing retrofitted homes.

ENERGY STAR homes certify energy efficiency through verification by independent third party RESNET-accredited technicians. This certification assesses building envelope thermal efficiency, air distribution, equipment, lighting and appliances.

5.3 CLIMATE NEUTRAL CERTIFICATION

Climate Neutral Certification is a consensus national standard used for taking new and existing buildings and homes to zero net conventional energy use and corresponding emissions. Climate Neutral buildings are certified by any licensed architect or engineer upon achievement of Climate Neutral status through any combination of energy efficiency and Green-e Renewable Power. Green-e Power can be achieved either onsite, offsite from the grid, or through Green-e Certified offsets or renewable energy certificate's ("REC").

Beyond incorporating building envelope and system energy efficiency measures, the Climate Neutral standard encourages the installation of Green-e on-site renewable energy including solar electric (photovoltaic), solar thermal, passive solar, wind, hot and ground source geothermal, biogas, biomass, low impact hydro, and/or renewable cogeneration. To achieve Climate Neutral Certification, homeowners may offset any remaining energy use through renewable power purchased on the open market from sources that are certified through the Green-e Renewable Electricity Certification Program or generated by the same owner on a different site and independently certified to Green-e.

Climate Neutral Certification is important given increased consumer and industrial electricity demands, grid infrastructure fragility and reliability, and long-term rising conventional energy costs stemming from 1) the sharp decline in the permitting of new coal fired power plants, 2) the high costs, long construction lead times, and onsite waste storage issues associated with nuclear power, 3) Wall Street's Carbon Principles adopted by JPMorgan Chase, Citi, Morgan Stanley and Bank of America, recognizing the impacts of climate change on the risk and pricing of carbon, and 4) global oil and natural gas depletion.

Information on the Green-e Renewable Electricity Certification Program can be found at Green-e.org and a copy of the Climate Neutral Building Standard can be obtained through ANSI.org at the following internet address:

http://webstore.ansi.org/FindStandards.aspx?Action=displaydept&DeptID=3144

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6.0 EMERGENCY NATURE OF THE STANDARD

This is an EMERGENCY standard due to the confluence of several very important global economic issues including:

1) Real estate and financial market credit crisis
2) Erosion of confidence in real estate underwriting standards
3) Long-term rising conventional energy costs and associated pervasive economic impacts
4) Increasing economic damages from dangerous climate change

Large scale adoption of the Standard can substantially mitigate adverse effects of these issues due to the recognition of risk reduction aspects of green building features. Specifically:

1. **Increased Investor Confidence**
   - Higher value collateral
   - Reduced risk (see Section 7.0)
   - Improved investor confidence
   - Improved goodwill due to social benefits of green buildings
   - Increased liquidity

2. **Energy Efficiency and Renewable Green-e Power**
   - Reduced energy consumption and associated expense reduction
   - Reduced peak-load energy pricing
   - Reduced grid reliance
   - Hedge against increased economic constraints regarding carbon (eg. *Carbon Principles*)
   - Reduced exposure to conventional energy price volatility
   - Improves energy security

3. **Climate Change and Climate Credit Risk/Damage Reduction**
   - Carbon footprint reduction
   - Efficiency cost savings
   - Insurance availability and continuing coverage

A relevant Capital Markets Partnership report further addressing these issues is *"Creating an Economic Stimulus and Stopping Climate Credit Risk / Irreversibility"*[3]

[3] Document available at **http://webstore.ansi.org/FindStandards.aspx?Action=displaydept&DeptID=3144**

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7.0 RISK REDUCTION

Green building techniques are synonymous with best management practices. These practices serve to enhance real estate asset value and reduce investment risk on a number of fronts. Residential real estate value is a combination of 1) desirability, 2) quality of the home / quality of life, and 3) future value, and in the case of green residential properties, 4) resource efficiency. Green residences positively affect all four metrics.

Investment standards that incorporate green building features inform investors on evolving best practices regarding investment approaches and risk reduction measures within the real estate industry. Critical market pressures have accelerated a rapidly growing green building market including rising conventional energy costs, lower asset operating costs, homeowner preferences swaying in favor of green homes, and climate change. The result has been to enhance the value of some assets and detract from the value of others.

Risk can be viewed as both an absolute reduction in risk exposure as well as the opportunity to achieve enhanced value through one set of asset attributes as compared to an asset without those same attributes. Risk-based measures attributed to green residential buildings can be broken into categories as follows:

1. **Value**
   - Property desirability on sale relative to market
   - Length of time the home can maintain a market position more valuable than conventional homes
   - Risk probability of mortgage default and corresponding debt writedown
   - ENERGY STAR rating and positive effects on ongoing operating costs

2. **Ongoing Cost Containment**
   - Decreased obsolescence risk relative to market
   - Competitive stance in comparison to surrounding homes over time
   - Appreciation compared to conventional homes
   - Containment of future renovation and operational costs

3. **Operating Expense Efficiency and Cost Escalation Containment**
   - Completed home durability report and system longevity
   - Utility cost reduction and efficiencies through design and technology
   - Systems that reduce a resident's exposure to utility cost escalation and price volatility
   - HVAC system maintenance and repair
   - Ability to qualify for insurance discounts

4. **Risk Profile**
   - Reduced exposure to indoor air quality ("IAQ") problems / protection from liability
   - Reduced exposure from mold reduction strategies / protection from liability
   - Reduced exposure to any climate change regulatory changes
   - Lower default risk stemming from higher equity, reduced monthly utility bills, exposure to energy price volatility, and base risk exposure from IAQ and mold

5. **Overall Advantage**
   - Qualification for cheaper cost of capital for upgrades (home equity and refinance rates cheaper than rates for conventional homes)

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8.0 INTANGIBLES / EXTERNALITIES TRANSLATED TO INCREASED HOME VALUE

Many LEED and GreenPoint points add intangible value such as FSC certified wood, SMaRT certified sustainable products, erosion controls, education and regional materials / local production, but do not directly appear to add value or reduce expenses. These attributes can best be categorized as goodwill and intangible brand value. As a result, a separate category is identified for intangibles.

For homes, intangible value derived from an independently certified LEED, GreenPoint, ENERGY STAR or Climate Neutral Certified home can add to home value.

The following green building attributes have been included in consensus green building certifications covered in this Standard due to their high market demand providing social and environmental benefits:

- FSC Certified Wood (LEED-MR 7)
- SMaRT Certified Sustainable/EPP Products (LEED Innovation and Climate Neutral)
- Local / Regional Materials (LEED-MR 2)
- Construction Waste (LEED-MR 3) (prerequisite: construction waste planning leads to reduced costs to builder, and to homeowner for construction costs if passed through
- Previously Developed (LEED-LL 3) (reduced costs to builder and to homeowner for construction costs if passed through)
- Erosion control, minimized site disturbance, stormwater runoff (LEED-SS 1.1, SS 1.2, and SS 4)
- Landscaping: no invasive species (LEED SS 2.1)
- Ensure use of refrigerants that do not cause ozone layer depletion and climate change (LEED-EA 11)
- Material Efficient Framing (LEED-MR 1) (framing order waste factor limit results in reduced costs to builder and to homeowner for construction costs if passed through)

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9.0 UTILITY EXPENSE REDUCTION ASSUMPTIONS / AREAS OF VALUE CREATION

The National Green Building Underwriting Standard addresses several areas of value that positively impact homes and their desirability when compared to a 'market' peer group. Fully accounting for these attributes in both the underwriting, financing and quality of life for the occupant can result in homes achieving higher value when compared to other properties that either 1) do not achieve these certifications, or 2) do not achieve the specific attributes discussed further.

The transparency resulting from achieving key aspects of these certification standards provides underwriters relevant property value information in important areas including energy and water efficiency; location attributes including transit orientation; indoor environmental quality; and operational and durability superiority. Factoring these and other relevant issues into determining the 'market' peer group from which to assess value is a critical component of the underwriting process.

Real estate finance and appraisal professionals should incorporate these risk-based impacts within their assumptions at loan underwriting. Among the factors affecting ongoing operating and maintenance expenses and overall property value are:

1. Green Home Attributes That Reduce Overall Gross Expenses, Including Utilities

- Energy Efficiency Strategies Employed
- Energy Reduction: HVAC / Hot Water / Appliances
- Home Orientation for Natural Solar Gain Efficiencies
- Onsite Renewable Energy
- Water Efficiency / Use Reduction
- Non-Toxic Pest Control
- Preferred Location and Infrastructure Stability
- Community Resources and Public Transportation
- Improved Durability
- Integrative Process improving the overall home quality and reducing construction costs and expenses including utilities
- Site Selection
- Heat Island Reduction
- Homeowner Education

2. Market Attributes Other Than Expense Reduction That Also Affect Value

- LEED for Neighborhood Development Certification
- Access to Open Space
- LEED Low-VOC Materials
- ENERGY STAR IAQ Verification
- Indoor Environmental Quality / Ventilation / IAQ Effectiveness
- Reduced Site Disturbance / Tree Protection

3. Intangibles

There is recognition that as intangibles positively affect value, green homes will continue to develop a favorable market reputation. However, this value is difficult to accurately measure. Accordingly, green home attributes affecting only intangible value are listed in Section 11.0 of this Standard.

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10.0 CMP GREEN SCORE™ SCORING SYSTEM

The Capital Markets Partnership Green Value Score™ ("CMP Green Value Score") is a score ranging from 25-100. This score rates a home on its overall achievement of aspects relating to energy/water efficiency and associated operating costs, indoor environmental quality, and intangible factors. The rating is intended to provide additional transparent insight into investment risks and risk mitigation strategies particularly important to investment fiduciaries.

This score is intended for use by all capital market participants in investors, underwriting, loan decision making, rating agency reporting, and loan securitization data dissemination for rating agency rating and securitization information reporting among other uses.

The CMP Green Value Score is derived using a weighted formula that reflects an a prperty's EPA ENERGY STAR score, overall LEED and GreenPoint ratings, Climate Neutral Certification, and performance on this Standard.

Suggested implementation includes assigning several database fields to capture and store relevant asset-based information. These data points are identified in Section 4.1 titled "Implementation – Underwriting Data Requirements".

10.1 VALIDATION

A CMP Green Value Score must be validated by an accredited environmental professional, licensed architect or licensed engineer. This validation can include a LEED-Accredited Professional.

Independent validation of the CMP Green Value Score is required due to:

- An ENERGY STAR Home Energy Yardstick score must be independently verified.
- A LEED and GreenPoint certified home (any certification level) requires a judgment as to value range associated with the attainment of the various LEED or GreenPoint points on the Green Building Underwriting Standard as discussed in Sections 12.0 thru 14.0
- A non-LEED or GreenPoint certified home can be awarded points under this Standard as denoted in Section 11.3, Step 2B. These points are observational-based points that must be independently verified.

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1511 Wisconsin Avenue, NW
Washington, DC 20007
202-338-3131

10.2 CMP GREEN VALUE SCORE CALCULATION – OVERVIEW

The CMP Green Value Score is based on a scoring matrix which is both thorough and easy to implement.

The matrix derives a numeric score ranging from 25 to 100 comprised of a weighted compilation of an home's ENERGY STAR Home Energy Yardstick score, Climate Neutral Certification, LEED or GreenPoint rating, and performance on the Green Building Underwriting Standard.

This score is intended to ride with the property during underwriting, loan decision-making, securitization (if applicable) and capital market reporting.

Underwriters are able to input the appropriate score or criteria, then apply a weighting factor ("Value Ratio") to derive the Adjusted Score. The Adjusted Score, when totaled, equals the CMP Green Value Score which can then be used in underwriting decision making and reported to investors along with other relevant asset information. The formula is as follows:

CMP GREEN VALUE SCORE MATRIX	Score	Value Ratio	Adjusted Score
ENERGY STAR Yardstick Score / Converted HERS Rating		**40%**	
Green Building Underwriting Standard Score		**35%**	
Climate Neutral Certified	**YES**	**10%**	
	NO	**0%**	
LEED or GreenPoint RATING	**NONE**	**0%**	
	CERTIFIED	**2%**	
	SILVER	**5%**	
	GOLD	**10%**	
	PLATINUM	**15%**	
CMP GREEN VALUE SCORE		**100%**	

HERS / ENERGY STAR - CONVERSION TABLE

HERS Rating	Score
100	**50**
90	**55**
80	**60**
70	**70**
60	**80**
50	**90**
40	**95**
39 and below	**100**

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10.3 DISCUSSION – CMP GREEN VALUE SCORE "VALUE RATIO"

An element of the CMP Green Value Score is the "Value Ratio" (located in the third column of the CMP Green Score chart and **outlined in red** on the chart below) which weights the various components that comprise the Green Building Underwriting Standard. This Value Ratio is determined by placing principal focus on areas of tangible financial value and risk reduction, particularly energy prices and the impact on a home's current/future operating costs and sale/rent market competitiveness.

These direct tangible financial metrics are transparently identified through 1) the home's ENERGY STAR Home Energy Yardstick Score, and 2) the Green Building Underwriting Standard Score which has a significant weighting on energy and water operating costs as well as key location and indoor environmental quality aspects pertinent to rent/sale consideration. Further, homes that are Climate Neutral Certified have very low operating costs and are insulated from conventional energy price increases and associated price volatility.

This Value Ratio breakdown results in 85% of the CMP Green Score focused on energy and water efficiency, location, and indoor environmental quality, all having positive tangible impact on a home's ongoing revenue generation capability and operating cost profile.

CMP GREEN SCORE MATRIX	Score	VALUE RATIO	Adjusted Score
ENERGY STAR Home Energy Yardstick Score		**40%**	
Green Building Underwriting Standard Score		**35%**	
LEED or GreenPoint RATING	**NONE**	**0%**	
	CERTIFIED	**2%**	
	SILVER	**5%**	
	GOLD	**10%**	
	PLATINUM	**15%**	
Climate Neutral Certified	**YES**	**10%**	
	NO	**0%**	
CMP GREEN SCORE		**100%**	

The CMP Green Value Score also recognizes the intangible value inherent to achieving LEED and GreenPoint certification. This intangible value stems from the recognition placed on third-party LEED and GreenPoint certifications by the home buyer market. Homes achieving LEED or GreenPoint certification gain significant positive value stemming from media coverage and public relations opportunities, elevated sales/rent prices, and/or other measures of market goodwill.

In addition, there is imbedded value in the environmental aspects contained within LEED and GreenPoint that are not specifically called to attention as 'tangible' value. Over their history, the US Green Building Council and its LEED Rating System, and Build It Green and its GreenPoint RATED System have had a transformative effect on both the real estate industry and the industries that service the real estate industry including the construction, cleaning products, building materials, and furniture segments. This impact happens through market ripple effects that result in companies across numerous industries improving their environmental performance. Product examples include an increasing number of low-VOC

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paints / sealants / floor coverings, non-toxic green cleaning products, FSC certified wood, SMaRT Certified Sustainable Products, and Green-e power among numerous others.

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10.4 ENERGY STAR HOME ENERGY YARDSTICK SCORE DETERMINATION

There are two paths used to determine a residential ENERGY STAR score as follows:

1. Utilize the results of a HERS Rating Test
2. Utilize the EPA ENERGY STAR Home Energy Yardstick

HERS Rating Test

The HERS Index is a scoring system established by the Residential Energy Services Network ("RESNET") in which a home built to the specifications of the HERS Reference Home (based on the 2006 International Energy Conservation Code) scores a HERS Index of 100, while a net zero energy home scores a HERS Index of 0. Thus, the lower a home's HERS Index the more energy efficient it is in comparison to the HERS Reference Home.

Each 1-point decrease in the HERS Index corresponds to a 1% reduction in energy consumption compared to the HERS Reference Home. Therefore, a home with a HERS Index of 85 is 15% more energy efficient than the HERS Reference Home and a home with a HERS Index of 80 is 20% more energy efficient.

The HERS score must be verified and field tested by a Home Energy Rater who is an active ENERGY STAR Partner and certified by RESNET. The HERS score is also useful for implementation with multi-unit residential properties.

COMPLETE: Determine the HERS score, then apply the numeric conversion table in Section 10.0. Enter the number into the CMP Green Value Score matrix.

ENERGY STAR Home Energy Yardstick

http://www.ENERGY STAR.gov/index.cfm?fuseaction=home_energy_yardstick.showStep2

Establishing a residential home's ENERGY STAR rating through the Home Energy Yardstick can be accomplished through the EPA's web site in five (5) minutes or less with the proper data. Data required includes:

- Trailing 12 months of utility bills (monthly detailed or annual summary)
  - Total kwH consumed or total $ amount spent
- Type of energy used
  - Electricity (default)
  - Natural Gas
  - Fuel Oil
  - Propane
  - Kerosene
- Number of occupants
- Zip code
- Square footage
- Decade home was constructed (60's, 70's, 80's, etc.)

Once the data is entered, the ENERGY STAR Yardstick tool returns a score of 1-100 that rates the home's energy use compared to a peer group. A low number demonstrates poor energy efficiency while a high number denotes superior energy efficiency.

COMPLETE: Enter the ENERGY STAR Yardstick number into the matrix.

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10.5 CMP GREEN VALUE SCORE TRACKING OVER TIME

An important aspect of this Standard is to begin collecting, using, and reporting relevant asset-level data thereby allowing the market to arrive at appropriate risk-adjusted investment decisions. Measuring, tracking, and reporting this relevant data allows for better process management, analysis, and risk management at both the primary (origination) and secondary (securitization and security investment) levels within the capital markets.

Deriving a CMP Green Value Score as a benchmark assessment, then reporting this Score is a primary objective of this Standard. Gathering relevant, financially tangible information that is third-party validated then transparently reporting this data will allow financial market mechanisms to determine risk-adjusted value over time.

Financial institutions will find that all properties can achieve points on the CMP Green Value Score regardless of homebuilder / homeowner participation in the voluntary ENERGY STAR, LEED or Climate Neutral programs through the ENERGY STAR Yardstick benchmark score as well as various points within the Green Building Underwriting Standard scoring system that are available for non-certified projects.

Because ENERGY STAR, LEED, GreenPoint, and Climate Neutral Certification continue to be voluntary programs that are optional for adoption, at present time many properties may achieve what appears to be a low CMP Green Score. This is acceptable. All Green Value Scores show added financial value.

This Standard purposefully does not make suggestions or assertions as to how financial markets will interpret the CMP Green Value Score. Rather, this Standard recognizes that leading developers, property managers, homeowners and investors have adopted these voluntary assessment standards and are taking advantage of the short-term and long-term business and asset-based opportunities presented by incorporating these best practices.

Financial institutions should request an ENERGY STAR score, the certified LEED or GreenPoint scorecard if applicable, and a Climate Neutral Certification if applicable. It is advised that all financial institutions require clients to obtain and report the property's ENERGY STAR score as a condition of receiving financing.

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10.6 CMP GREEN VALUE SCORE SCORING EXAMPLES

EXAMPLE I

A 120-unit LEED Gold certified residential apartment with an ENERGY STAR HERS score of 60 (when converted equals an ENERGY STAR Score of 75) achieving a Green Building Underwriting Standard score of 75 (see Section 10.0 for scoring methodology and Sections 13.0 and 14.0 for specific descriptions) that is Climate Neutral Certified achieves a CMP Green Value Score of 76 calculated as follows:

Calculation Methodology – Green Building Underwriting Standard							
	LEED Point		Value Range			ADJUSTMENT	
Sorted by Factor Adjustment / Score	YES	NO	Low	High	SCORE	FACTOR	TOTAL
Non Toxic Pest Control	x		1	5	5	3	15
Community Resources & Public Transport.	x		0	4	3	3	9
Energy Efficiency	x		1	5	4	3	12
Water Efficiency / Use Reduction	x		0	1	1	3	3
Preferred Location & Infrastructure	x		1	3	2	3	6
On-Site Renewable Energy		x	1	3	0	3	0
Improved Durability	x		2	4	4	2	8
Orientation for Solar	x		1	3	3	2	6
Energy Reduction: Hot Water & Appliances	x		1	3	3	1.7	5
Whole System Integrated Planning		x	2	4	0	1	0
Indoor Environmental Quality	x		2	3	3	1	3
Reduced Disturbance / Tree Protection	x		2	3	3	1	3
Heat Island Effect	x		0	1	1	1	1
Site Selection	x		0	1	1	1	1
Homeowner Education		x	1	3	0	0.5	0
LEED for Neighborhoods		x	1	2	0	0.5	0
Access to Open Space	x		2	3	3	0.5	1.5
Low VOC	x		2	3	3	0.5	1.5
TOTAL REVENUE POINTS							75
% of Maximum Allowable			100 points maximum				100.00%

CMP GREEN VALUE SCORE MATRIX	Score	Value Ratio	Adjusted Score
ENERGY STAR Score / HERS Rating Converted	75	40%	30
Green Building Underwriting Standard Score	75	35%	26
Climate Neutral Certified	YES	10%	10
	NO	0%	
LEED RATING	NONE	0%	
	CERTIFIED	2%	
	SILVER	5%	
	GOLD	10%	10
	PLATINUM	15%	
CMP GREEN VALUE SCORE		100%	76

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EXAMPLE II

A non-LEED certified residential home with an ENERGY STAR Yardstick score of 43 implementing basic energy efficiency measures located in a generic track-home sub-division failing to use non-toxic pest control achieves a Green Building Underwriting Standard score of 33.5. The residence is not Climate Neutral Certified. Therefore, this home achieves a CMP Green Value Score of 29 calculated as follows:

Calculation Methodology – Green Building Underwriting Standard							
	LEED Point		Value Range			ADJUSTMENT	
Sorted by Factor Adjustment / Score	YES	NO	Low	High	SCORE	FACTOR	TOTAL
Non Toxic Pest Control		x	1	5	0	3	0
Community Resources & Public Transport.		x	0	4	0	3	0
Energy Efficiency	x		1	5	2	3	6
Water Efficiency / Use Reduction	x		0	1	1	3	3
Preferred Location & Infrastructure	x		1	3	1	3	3
On-Site Renewable Energy		x	1	3	0	3	0
Improved Durability	x		2	4	4	2	8
Orientation for Solar	x		1	3	1	2	2
Energy Reduction: Hot Water & Appliances	x		1	3	3	1.7	5
Whole System Integrated Planning		x	2	4	0	1	0
Indoor Environmental Quality	x		2	3	3	1	3
Reduced Disturbance / Tree Protection		x	2	3	0	1	0
Heat Island Effect	x		0	1	1	1	1
Site Selection	x		0	1	1	1	1
Homeowner Education		x	1	3	0	0.5	0
LEED for Neighborhoods		x	1	2	0	0.5	0
Access to Open Space		x	2	3	0	0.5	0
Low VOC	x		2	3	3	0.5	1.5
TOTAL REVENUE POINTS							33.5
% of Maximum Allowable			100 points maximum				100.00%

CMP GREEN VALUE SCORE MATRIX	Score	Value Ratio	Adjusted Score
ENERGY STAR Score / HERS Rating Converted	43	40%	17
Green Building Underwriting Standard Score	33.5	35%	12
Climate Neutral Certified	YES	10%	
	NO	0%	0
LEED RATING	NONE	0%	0
	CERTIFIED	2%	
	SILVER	5%	
	GOLD	10%	
	PLATINUM	15%	
CMP GREEN VALUE SCORE		100%	29

Green Value Scores below 25 are not reported under this Standard.

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11.0 GREEN BUILDING UNDERWRITING STANDARD – CALCULATION AND SCORING

The Green Building Underwriting Standard focuses attention on the LEED or GreenPoint scorecard and the achievement of critical points exhibiting tangible financial value summarized in Sections 12.0 thru 14.0 of this Standard which are directly applicable to an home's current/future financial results for value, operating expenses, and overall financial risk.

The Standard is structured to allow for professional judgment as to the applicability and relevance of these factors through a range of magnitude for the identified green attributes. This judgment is utilized in a structured fashion in conjunction with a weighting factor to determine the Green Building Underwriting Standard score.

The calculation methodology is simple for real estate finance professionals, underwriters, and appraisers to understand and implement. Underwriters can determine a Green Building Underwriting Standard Score via the following steps:

STEP 1 Examine the proper LEED or GreenPoint scorecard to determine if the point was achieved
- LEED or GreenPoint New Construction
- LEED Operations and Maintenance

STEP 2 Assign a Score to each LEED or GreenPoint point as detailed in Sections 12.0 – 14.0

STEP 3 Multiply this value by the fixed number under the "Adjustment Factor"

STEP 4 Total the column to derive the score on the Green Building Underwriting Standard

Calculation Methodology – Green Building Underwriting Standard

Sorted by LEED criteria / building attribute	LEED Point YES	LEED Point NO	Value Range Low	Value Range High	SCORE	ADJUSTMENT FACTOR	TOTAL
Site Selection	x		0	1	1	1	1
Preferred Location & Infrastructure	x		1	3	3	3	9
Community Resources & Public Transport.	x		0	4	4	3	12
Heat Island Effect	x		0	1	1	1	1
Water Efficiency / Use Reduction	x		0	1	1	3	3
Energy Efficiency	x		1	5	5	3	15
On-Site Renewable Energy	x		1	3	3	3	9
Orientation for Solar	x		1	3	3	2	6
Energy Reduction: Hot Water & Appliances	x		1	3	3	1.7	5
Indoor Environmental Quality	x		2	3	3	1	3
Homeowner Education	x		1	3	3	0.5	1.5
LEED for Neighborhoods	x		1	2	3	0.5	1.5
Access to Open Space	x		2	3	3	0.5	1.5
Low VOC	x		2	3	3	0.5	1.5
Improved Durability	x		2	4	4	2	8
Reduced Disturbance / Tree Protection	x		2	3	3	1	3
Non Toxic Pest Control	x		1	5	5	3	15
Whole System Integrated Planning	x		2	4	4	1	4
TOTAL POINTS							100
% of Maximum Allowable	100 points maximum						100.00%

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11.1 "ADJUSTMENT FACTOR" DISCUSSION

The Adjustment Factor within the Green Building Underwriting Standard scoring system ranges from a high of 3.0 to a low of 0.5 based on the particular green attribute's financial relevance.

Four attributes – Energy Efficiency, Non-Toxic Pest Control, and Onsite Renewable Energy – were assigned a 3 or 3.4 on the Adjustment Factor, the highest score. This rating is due to the strong financial value of these three green attributes. **The adjustment factors are fixed components of the scoring system and cannot be changed.**

Energy/Water Efficiency – Energy and water/sewer is one of the largest expense items within an home's operating profile. Energy/water efficiency affects both a home's current financial profile as well as impacts a home's future risk profile given exposure to volatile conventional energy/water prices.

Public Transportation Access – Homes with proximate access to public transportation offer alternative means with which to access the property. Access to public transportation is a high-value amenity as increasing transportation alternatives decreases an owner's overall transportation costs.

Non Toxic Pest Control – Misapplication of pesticides, fungicides and rodenticides frequently results in homes being uninhabitable at a total loss. The home is actually classified as a hazardous waste under state and federal law with $25,000 / day fines to the pesticide applicator.

Onsite Renewable Energy – Onsite energy generation capability can reduce an home's peak load profile used to determine the overall utility rate, lowers the home's overall grid-based energy use, and reduces risk to future conventional energy price increases and volatility.

The remaining green attributes are assigned an Adjustment Factor in accordance with their impact on financial value and financial risk.

Calculation Methodology – Green Building Underwriting Standard

Sorted by LEED criteria / building attribute	LEED Point YES	LEED Point NO	Value Range Low	Value Range High	SCORE	ADJUSTMENT FACTOR	TOTAL
Site Selection	x		0	1	1	1	1
Preferred Location & Infrastructure	x		1	3	3	3	9
Community Resources & Public Transport.	x		0	4	4	3	12
Heat Island Effect	x		0	1	1	1	1
Water Efficiency / Use Reduction	x		0	1	1	3	3
Energy Efficiency	x		1	5	5	3	15
On-Site Renewable Energy	x		1	3	3	3	9
Orientation for Solar	x		1	3	3	2	6
Energy Reduction: Hot Water & Appliances	x		1	3	3	1.7	5
Indoor Environmental Quality	x		2	3	3	1	3
Homeowner Education	x		1	3	3	0.5	1.5
LEED for Neighborhoods	x		1	2	3	0.5	1.5
Access to Open Space	x		2	3	3	0.5	1.5
Low VOC	x		2	3	3	0.5	1.5
Improved Durability	x		2	4	4	2	8
Reduced Disturbance / Tree Protection	x		2	3	3	1	3
Non Toxic Pest Control	x		1	5	5	3	15
Whole System Integrated Planning	x		2	4	4	1	4
TOTAL POINTS							100
% of Maximum Allowable	100 points maximum						100.00%

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12.0 GREEN BUILDING UNDERWRITING STANDARD – SCORING MECHANICS

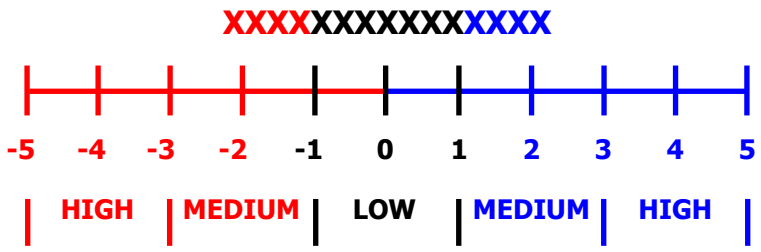
Based on the green features present at the property level, these criteria are identified and summarized as to its value impact. Each LEED or GreenPoint criterion identified has a description of underwriting impact. The description is followed by the graphic below denoting a range of impact on value. **Negative** impacts on value are depicted in **red**, **minimal/neutral** value impacts in **black**, and **positive** value impacts in **blue**.

In each graphic, the **"XXXX-ed"** out area for the value continuum delineates a range which to apply this specific factor to asset underwriting using best professional judgment based on all relevant and/or situational information applicable.

Once these property-specific features are identified and appropriate value is attributed through a numerical score on the Green Building Underwriting Standard, underwriters can use this information to appropriately assess a property's risk profile and determine the CMP Green Value Score.

Once the CMP Green Value Score is derived, it is intended to ride with the property based on a vintage year. The CMP Green Value Score is applicable to both internal decision making and external reporting to relevant parties including rating agencies, secondary market investors, corporate-level financial and environmental reporting, and other pertinent applications.

If the property undergoes capital improvements at a future date, the CMP Green Value Score should be recalculated, a new vintage year assigned, and then re-reported accordingly.



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12.1 FOUR-STEP SCORING PROCESS

The Standard is designed to be straightforward for borrowers and lenders to implement and easily understood by investors, rating agencies and other capital market participants.

ACQUIRING THE CMP GREEN VALUE SCORE REQUIRES FOUR (4) STEPS:

STEP 1 – Secure proper underwriting documentation:

- ENERGY STAR Score / Statement of Energy Performance
- LEED or GreenPoint Certification type and certified scorecard
- Climate Neutral Certification
- Commissioning and/or property inspection report (recommended)

STEP 2 – Assess the certified LEED or GreenPoint scorecard for the specific credits attained and assign appropriate value scores.

The example below shows a Green Building Underwriting Score of 70 on the Green Building Underwriting Standard using the LEED or GreenPoint scorecard.

Check the Y/N box for points achieved corresponding to the specific LEED scorecard

Assign a Score based on the value ranges specified in this Standard corresponding with the LEED credit

Multiply the Score by the Adjustment Factor to determine the Total

Calculation Methodology – Green Building Underwriting Standard

Sorted by Factor Adjustment / Score	LEED Point YES	LEED Point NO	Value Range Low	Value Range High	SCORE	ADJUSTMENT FACTOR	TOTAL
Non Toxic Pest Control	x		1	5	5	3	15
Community Resources & Public Transport.	x		0	4	3	3	9
Energy Efficiency	x		1	5	4	3	12
Water Efficiency / Use Reduction	x		0	1	1	3	3
Preferred Location & Infrastructure	x		1	3	2	3	6
On-Site Renewable Energy		x	1	3	0	3	0
Improved Durability	x		2	4	3	2	6
Orientation for Solar	x		1	3	3	2	6
Energy Reduction: Hot Water & Appliances	x		1	3	2	1.7	3
Whole System Integrated Planning		x	2	4	0	1	0
Indoor Environmental Quality	x		2	3	3	1	3
Reduced Disturbance / Tree Protection	x		2	3	3	1	3
Heat Island Effect		x	0	1	0	1	0
Site Selection	x		0	1	1	1	1
Homeowner Education		x	1	3	0	0.5	0
LEED for Neighborhoods		x	1	2	0	0.5	0
Access to Open Space	x		2	3	3	0.5	1.5
Low VOC	x		2	3	3	0.5	1.5
TOTAL REVENUE POINTS							70
% of Maximum Allowable			100 points maximum				100.00%

EXAMPLE – Assigning a Score: If the LEED or GreenPoint scorecard shows that the home achieved 7 of the possible 10 LEED points under "EA-1 Energy Efficiency", this home can be scored a "4" for this credit as shown above. All scores on each credit are based on professional judgment.

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STEP 3 – Determine the CMP Green Value Score:

Information available at this stage should include:

- **ENERGY STAR Score / HERS Rating** **(recall conversion in Section 10.2, page 15)**
- **Level of LEED or GreenPoint certification** **(none, Certified, Silver, Gold, Platinum)**
- **Point total on the Green Building Underwriting Standard**
- **Climate Neutral Certification**

EXAMPLE: CMP Green Value Score = 53

- 180-unit condo asset
- ENERGY STAR score = **60**
- LEED Silver certified
- Not certified as Climate Neutral
- Green Building Underwriting Standard Score = **70** (as seen below)

CMP GREEN SCORE MATRIX	Score	Value Ratio	Adjusted Score
ENERGYSTAR Score / HERS Rating Converted	60	40%	24
Green Building Underwriting Standard Score	70	35%	24
Climate Neutral Certified	YES	10%	
	NO	0%	0
LEED RATING	NONE	0%	
	CERTIFIED	2%	
	SILVER	5%	5
	GOLD	10%	
	PLATINUM	15%	
CMP GREEN SCORE		100%	53

Calculation Methodology – Green Building Underwriting Standard							
	LEED Point		Value Range			ADJUSTMENT	
Sorted by Factor Adjustment / Score	YES	NO	Low	High	SCORE	FACTOR	TOTAL
Non Toxic Pest Control	x		1	5	5	3	15
Community Resources & Public Transport.	x		0	4	3	3	9
Energy Efficiency	x		1	5	4	3	12
Water Efficiency / Use Reduction	x		0	1	1	3	3
Preferred Location & Infrastructure	x		1	3	2	3	6
On-Site Renewable Energy		x	1	3	0	3	0
Improved Durability	x		2	4	3	2	6
Orientation for Solar	x		1	3	3	2	6
Energy Reduction: Hot Water & Appliances	x		1	3	2	1.7	3
Whole System Integrated Planning		x	2	4	0	1	0
Indoor Environmental Quality	x		2	3	3	1	3
Reduced Disturbance / Tree Protection	x		2	3	3	1	3
Heat Island Effect		x	0	1	0	1	0
Site Selection	x		0	1	1	1	1
Homeowner Education		x	1	3	0	0.5	0
LEED for Neighborhoods		x	1	2	0	0.5	0
Access to Open Space	x		2	3	3	0.5	1.5
Low VOC	x		2	3	3	0.5	1.5
TOTAL REVENUE POINTS							70
% of Maximum Allowable			100 points maximum				100.00%

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STEP 4 – FINAL: Include as Due Diligence Exhibit or Appraisal Attachment

At this point, the following documents should be available for inclusion as an underwriting due diligence report or exhibit to the appraisal:

1. ENERGY STAR Statement of Energy Performance and/or ENERGY STAR certification
2. LEED or GreenPoint Certification and scorecard (if applicable)
3. CMP Green Value Score (see Section 10.2 and Appendix)
4. Green Building Underwriting Standard worksheet (see Section 12.1 and Appendix)
5. Green Building Underwriting Standard Point Credit Evaluation narratives (see Appendix)
6. Commissioning or Inspection report (if applicable)

For each point credit attested to on the Green Building Underwriting Standard, item #5 above requires a brief narrative regarding the score granted for a particular property feature and reasoning for that score. The following format should apply – see Appendix for examples:

Credit Description:	INSERT NAME OF CREDIT AWARDED
Score Assessed:	INSERT SCORE
Score Range:	_____Minimum to _____Maximum
Narrative:	PROVIDE WRITTEN DESCRIPTION INCLUDING RATIONALE FOR SCORE ASSESSMENT

USING THE CMP GREEN VALUE SCORE

The CMP Green Value Score can be used by the <u>primary</u> market as a risk-management tool for:

- Loan application review
- Loan committee decision making
- Purchase and sale negotiations

The CMP Green Value Score can be used by the <u>secondary</u> market as an information point to assess asset quality, 'green' attributes, and overall management quality via:

I. Portfolio Analysis and Disclosure
- Pooled debt/equity investment vehicles
- Private equity portfolios

II. Corporate Information Disclosure
- Private client reporting
- Quarterly or annual financial reports
- Regulatory reports
- Analyst conference calls

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13.0 UTILITY AND EXPENSE REDUCTIONS

Background

The following green building attributes demonstrate long term homeowner expense reductions thus inherently adding to the home value. From an investment perspective, homeowners that have more money from fewer expenses therefore have more available revenue to pay the mortgage. This reduces default risk.

13.1 WHOLE SYSTEMS INTEGRATIVE PLANNING (WSIP)

LEED Integrative Project Planning ID 1.1-1.4
Climate Neutral § 4.k - WSIP ANSI Standard

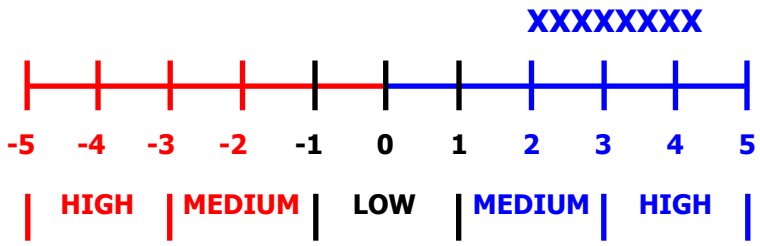
Description

Integrative project planning brings together at the start of the process all of the project team, i.e., key professionals involved in home design and construction or refurbishing to identify the level of certification and thus attributes of the green home. The building industry has recognized the efficiency and effectiveness of Integrative Design and is working to incorporate it into all construction, not just green buildings and homes. As example, the Navy experienced 9% fewer change orders from Integrative Design (WSIP ANSI Committee Correspondence 2007). WSIP is applicable to single homes and communities.

Expenses and construction costs are reduced by:

- Reduced construction and operating costs
- Prevented expenses by avoiding repairs from failures, e.g., mold, termite damage, toxic pollution
- Following the ANSI Integrated Design Standard to ensure the benefits are achieved [4]

Relative Impact



Underwriting Documentation

- Analysis / confirmation of LEED certification that includes this credit.

[4] The integrated design standard is available at http://webstore.ansi.org/FindStandards.aspx?Action=displaydept&DeptID=3144

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13.2 BUILDING ORIENTATION FOR SOLAR

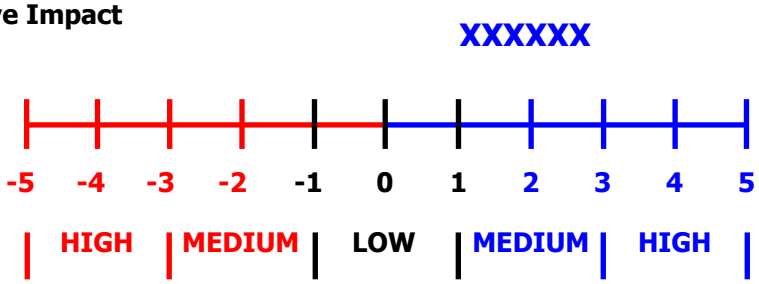
LEED ID 1.5

Description

Maximizing solar energy use through simple home design orientation specified in this credit is a valuable addition. Expenses are reduced by:

- Increased availability of natural light thereby reducing overall electricity use
- Managed solar heat gain thereby reducing air conditioning requirements and/or decreasing heating requirements depending on climatic region

Relative Impact



Underwriting Documentation

- Analysis / confirmation of LEED or GreenPoint certification that includes this credit.

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13.3 DURABILITY MANAGEMENT

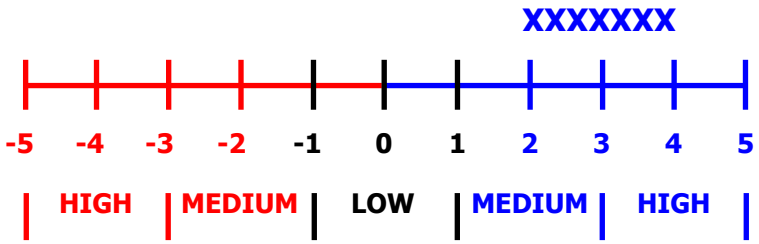
LEED ID 2.1-2.3

Description

These credits improve home performance and durability through the design, materials selection and construction including by controlling moisture. Expenses are reduced by:

- Preventing mold and costly remediation and health risks
- Preventing repairs

Relative Impact



Underwriting Documentation

- Analysis / confirmation of LEED or GreenPoint certification that includes this credit.

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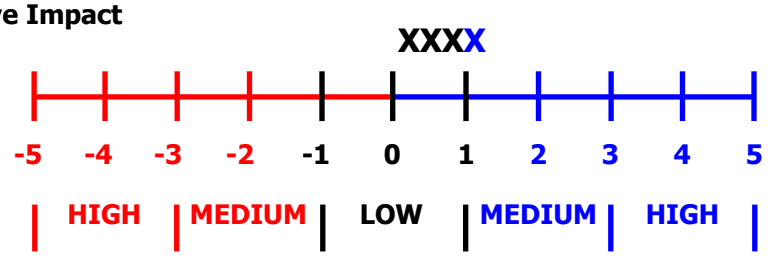
13.4 LOCATION AND LINKAGES

LEED LL-2 – SITE SELECTION

Description

LEED LL-2 requires homes to not be built at an elevation at or below the FEMA 100-year flood designation, or within 100' of wetlands, or within 100' of any water. Achieving LEED SS-1 adds to home desirability and expense reduction by positively reducing the homes' flooding potential, evacuation potential stemming from flooding or other storm-related hazards, and also positively impacts its overall loss profile for insurance purposes.

Relative Impact



Underwriting Documentation

- Analysis / confirmation of LEED or GreenPoint certification that includes this credit.

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13.5 LOCATION AND LINKAGES

LEED LL-3 – PREFERRED LOCATION
LEED LL-4 – INFRASTRUCTURE

Description

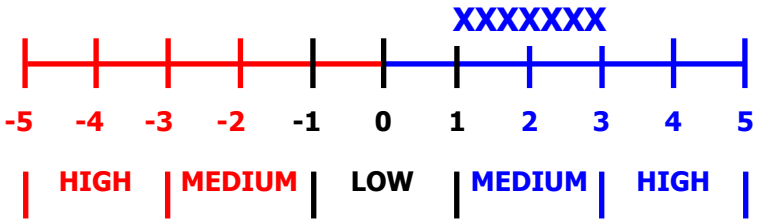
LEED LL-3 requires homes to be located near or within existing communities and LL-4 requires homes to be located on existing water and sewer.

Achieving LEED LL-3 positively adds to home desirability and value since they are by nature supply constrained (less available due to limited space). Urban homes in supply-constrained 24/7 cities outperform 'commodity' suburban homes over the long term.[5]

Existing water and sewer can prevent expenses from well construction and septic tank installation and maintenance. Value and associated positive revenue impacts are defined by:

- Shortened commutes – time and absolute cost
- Increased neighborhood amenities
- Faster home sale
  - worker attraction / retention
  - Increased demand [6]
- Increased pedestrian access / friendliness

Relative Impact



Underwriting Documentation

- Analysis / confirmation of LEED or GreenPoint certification that includes this credit.

5 Korpacz / ULI published cap rates show differences ranging from 100-700+ basis points between urban and suburban office properties; these quarterly reports have consistently reflected a cap rate premium ascribed to urban properties. These factors for commercial realty are also applicable for home value.

6 In a national survey by Smart Growth America and National Association of Realtors, 6 out of 10 prospective homebuyers chose a higher-density, mixed use community.

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13.6 LEED LOCATION AND LINKAGES

LL-4.1 – COMMUNITY RESOURCES / PUBLIC TRANSPORTATION ACCESS

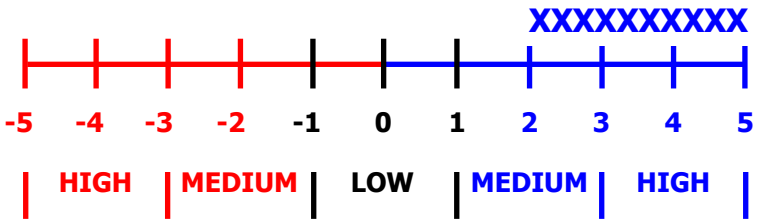
Description

Achieving the LEED LL-4.1 credit requires buildings to be located within ½ mile of an existing or planned-and-funded commuter rail, light rail or a subway station, offering 30 or more rides per weekday.

Community resources are 19 factors such as schools, police, libraries, fire station, post office, restaurants etc. Credit is achieved by being either within a quarter or half mile of a minimum number of resources. Value and associated positive revenue impacts are defined by:

- Location premium due to transit-oriented development
- Increased commute choices / mass transit connectivity
- Increased site access

Relative Impact



Underwriting Documentation

- Analysis / confirmation of LEED or GreenPoint certification that includes this credit.

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13.7 LOCAL HEAT ISLAND EFFECT

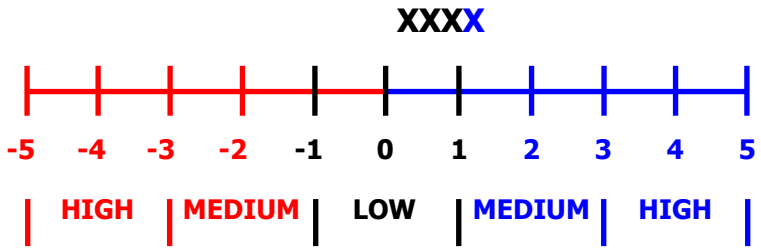
LEED SS-3

Description

Designing landscape features reducing heat island effects can substantially reduce air conditioning needs saving expenses. This credit requires trees and local plantings and high albedo surfaces for 50% of sidewalks, driveways, patios and within 50 feet of the home. Value and associated positive revenue impacts are defined by:

- Reduced summer utilities
- Increased neighborhood desirability

Relative Impact



Underwriting Documentation

- Analysis / confirmation of LEED or GreenPoint certification that includes this credit.

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13.8 NON-TOXIC PEST CONTROL

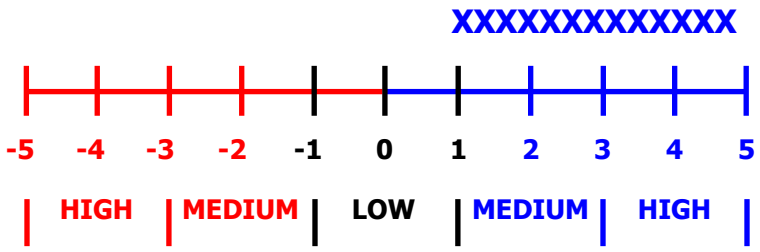
LEED SS-5

Description

Designing home to minimize or eliminate the needs for poisons for pest control including rodents, pests and termites, through barriers, sealing and non toxic treatment. Conventional poison application frequently is misapplied inconsistent with the label rendering many homes uninhabitable and classified as hazardous waste. The incidence is frequent enough that substantial local government regulation of applicators has been initiated. Value and associated positive revenue impacts are defined by:

- Preventing very costly long term repairs, remediation, health hazards, temporary and permanent evacuation and litigation costs.

Relative Impact



Underwriting Documentation

- Analysis / confirmation of LEED or GreenPoint certification that includes this credit.

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13.9 WATER EFFICIENCY

LEED Water Efficiency WE-3.1 – 20% Water Use Reduction
LEED Water Efficiency WE-3.2 – 30% Water Use Reduction
LEED Water Efficiency WE-1.0 – Water Reuse
LEED Water Efficiency WE-2.1 – High Efficiency Irrigation
LEED Water Efficiency WE-2.3 – Reduced Irrigation
EPA WaterSense Certification

Description

LEED WE-3.1 and WE-3.2 require the asset to achieve significantly lower water consumption. These LEED points only apply to interior water use including water closets, urinals, lavatory faucets, showers and kitchen sinks; it excludes irrigation.

WE-1.0 uses water reuse to save on usage. WE-2-2 through 2-4 employ a variety of practices reducing outdoor irrigation needs thus saving water including drought tolerant turf, limiting conventional turf, and irrigation systems reducing water use by at least 20%.

Important considerations for including water use reduction are potential impacts on the water utility rates over the life of a homeowner's occupancy.

Specific considerations include:

1. Data on past five years of specific municipality pricing history
2. A municipalities' current freshwater access and near-term need for infrastructure projects to acquire new supplies
3. Near-term wastewater treatment infrastructure needs
4. A utility's recent move or desire to change rate structure from a flat rate to Volume Usage Pricing charge mechanism.
5. Enforcement or other regulatory action significantly increasing rates such as total maximum daily load requirements under the Clean Water Act.
6. Regional pervasive droughts affecting rates such as in Atlanta and Las Vegas.

Important macro considerations include:

- Over the past five years, municipal water rates have increased of 27% in the US, 32% in the UK, and 45% in Australia (average).
- The US currently ranks 14th in the world on municipal water costs; Germany's municipal water utility charges are 350% higher than the US and the UK is 300% higher.
- In certain regions, climate change has increased aridity and the premium for new water supplies including Atlanta and Las Vegas. Continued severe pressure on water supplies in these regions could affect building permits. See *Creating Economic Stimulus and Stopping Climate Credit Risk / Irreversibility* (Capital Markets Partnership 2008).

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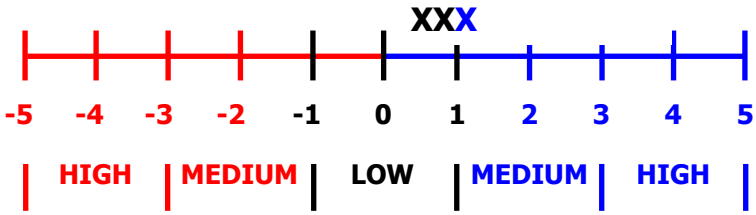
Underwriters should look for building technologies and strategies that include high-efficiency fixtures, dual-flush water closets, waterless urinals, occupant sensors on wash basins, and faucet aerators. Additional strategies include reusing stormwater / greywater for non-potable applications (toilet / urinal flushing). The expense reduction benefit to homeowners stem from reduced exposure to water price increases, future price volatility, and water access issues.

Relative Impact



Underwriting Documentation

- Analysis / confirmation of LEED or GreenPoint certification that includes this credit
- Achievement of EPA Water Sense certification

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13.10 ENERGY EFFICIENCY

LEED Energy and Atmosphere EA-1 – Energy Efficiency
Climate Neutral Certification
ENERGY STAR Certification

Description

Homeowners achieving one or more of the LEED EA-1 point credits have invested capital in aspects of building envelope insulation, lighting strategies, and/or HVAC systems that reduce the asset's overall energy use and expense profile. These investments provide a lower total occupancy cost. Climate Neutral Certified homes have no reliance on conventional energy; onsite renewable energy provides the greatest value followed by greater than 5 year renewable power grid contracts. Climate Neutral homes require as a prerequisite energy efficiency improvements.

As a result, these homes should command higher value through lower expenses and reducing exposure to long term conventional energy price volatility taking into account documented impacts from climate change and global resource depletion.

Homes that fail to achieve certification for energy efficiency attributes will experience higher operating expenses and an overall higher total cost of occupancy that should hinder their market competitiveness at time of sale.

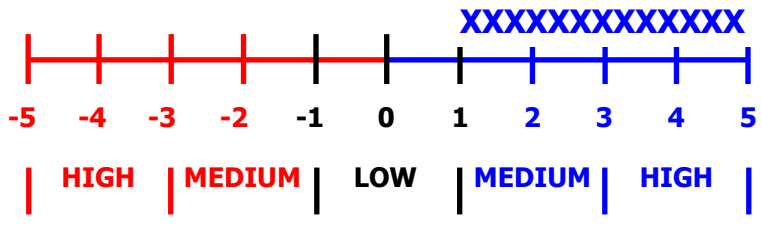
There is an alternate LEED Home compliance path for this credit which consists of the following prerequisites:

- Insulation EA 2
- Air infiltration EA 3
- Windows EA 4
- Duct Tightness EA 5
- Space Heating and Cooling EA 6

Value and associated positive revenue impacts are defined by:

- Higher sale price due to reduced energy/operational costs
- Reduced exposure to future energy price volatility
- Reduced overall occupancy costs
- Faster sale

Relative Impact



Underwriting Documentation

- Analysis / confirmation of LEED or GreenPoint certification that includes this credit
- Climate Neutral Home Certification
- ENERGY STAR Certification

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13.11 ENERGY REDUCTION: HOT WATER AND APPLIANCES

LEED EA-7 – Domestic Hot Water
LEED EA 8 – Lighting Efficiency
LEED EA-9 – Appliance Efficiency

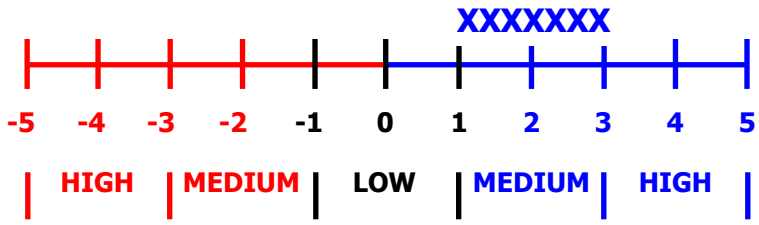
Description

These optional LEED credits cover efficient hot water heating and distribution, ENERGY STAR Lighting and Advanced ENERGY STAR Lighting, and ENERGY STAR Appliances. These activities all reduce energy use.

Lighting and appliances need to be replaced with ENERGY STAR lighting and appliances in order for the cost saving benefits to continue beyond the initial product cycle when the lighting or appliance has to be replaced. Value and associated positive cost saving impacts are defined by:

- Reduced annual energy costs
- Reduced exposure to future utility cost price volatility
- Reduced downtime risk due to grid failures
- Reduced dependency on conventional energy
- Exposure to reduced grid-based energy availability for future needs

Relative Impact



Underwriting Documentation

Analysis / confirmation of LEED or GreenPoint certification that includes these credits.

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13.12 LEED AE-1 – HOMEOWNER EDUCATION

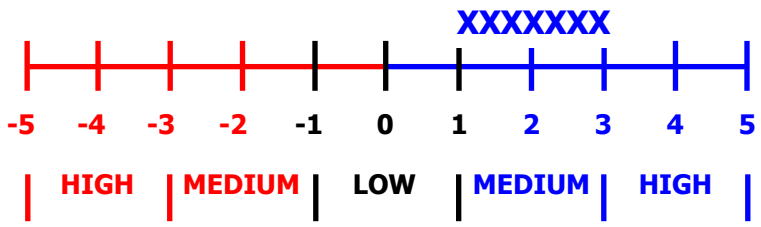
Description

Basic operations training is a prerequisite whereby the homeowner is given an operations manual on equipment, occupant activities and choices, and a one hour walkthrough covering equipment, operations and maintenance.

There are also two optional credits: Enhanced Training and Public Awareness. Value and associated positive cost saving impacts are defined by:

- Reduced annual energy costs
- Reduced exposure to future utility cost price volatility
- Reduced downtime risk due to grid failures
- Reduced dependency on conventional energy
- Exposure to reduced grid-based energy availability for future needs

Relative Impact



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14.0 OTHER POSITIVE VALUE ATTRIBUTES

14.1 ONSITE RENEWABLE POWER

LEED EA-10 – On-Site Renewable Energy
Climate Neutral Onsite Green-e Power

Description

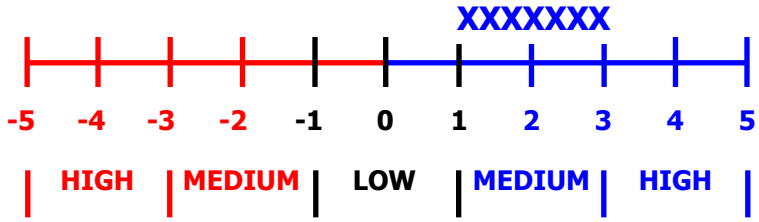
Successful achievement of the LEED EA-10 credit and/or Green-e renewable power in Climate Neutral Certified buildings requires buildings to implement Green-e onsite renewable energy generation including solar, wind, hot and cold/groundsource geothermal, low-impact hydro, biomass and bio-gas strategies.

Benefits of onsite energy generation capabilities include reducing the home's peak load profile which can be used to determine the overall utility rate, as well as reducing the home's overall usage amount.

In addition, onsite renewable energy production reduces the owner's exposure to long term conventional energy price volatility thereby smoothing out operating cost fluctuations which result in lowered risk of credit default on debt obligations, e.g., foreclosure. Value and associated positive revenue impacts are defined by:

- Reduced annual energy costs – rate and amount
- Reduced exposure to future utility cost price volatility
- Reduced downtime risk due to grid failures
- Reduced dependency on conventional energy
- Exposure to reduced grid-based energy availability for future needs

Relative Impact



Underwriting Documentation

- Analysis / confirmation of LEED or GreenPoint certification that includes this credit
- Climate Neutral Certification showing onsite Green-e Power generation equal to 3% or greater of total consumption

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14.2 LEED-LL1 NEIGHBORHOOD DEVELOPMENT

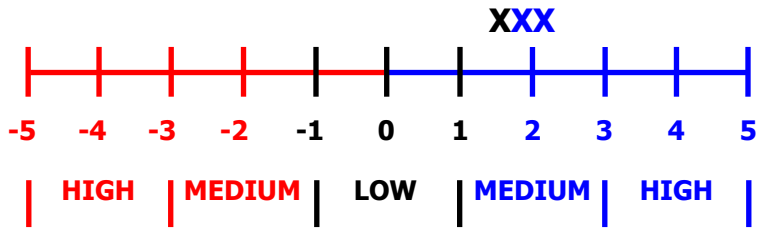
Description

LEED ND minimizes the neighborhood impact of land development through certification. LEED ND amenities include walk to open space, universal access, car free areas, walkable neighborhoods, neighborhood stormwater systems, wastewater treatment and food production.

Value and associated positive revenue impacts are defined by:

- Overall increase in quality of life from added amenities
- Increased occupant satisfaction and productivity
- Increased likelihood of higher home resale value

Relative Impact



Underwriting Documentation

- Analysis / confirmation of LEED certification that includes this credit

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14.3 LEED LL6 – ACCESS TO OPEN SPACE

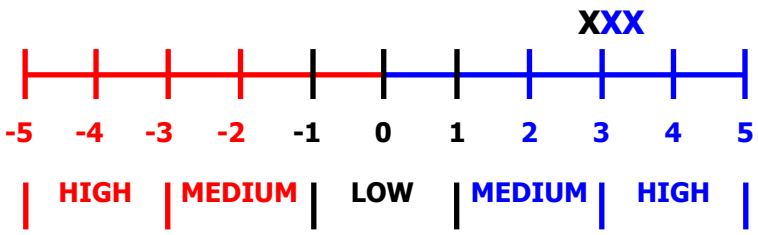
Description

Credit is awarded for homes within ½ miles of publicly accessible or community natural open space at least ¼ acre in size. This type of open space is a home locational attribute making it more attractive to buyers.

Value and associated positive revenue impacts are defined by:

- Overall increase in quality of life from added amenities
- Increased occupant satisfaction and productivity
- Reduced smog
- Increased occupant satisfaction and productivity
- Increased likelihood of higher home resale value

Relative Impact



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14.4 LOW VOC MATERIALS

LEED-MR 2: Table 25 – Interior walls, ceilings, and millwork
LEED-MR 2: Table 26 – Low emission adhesives and sealants
Small Chamber Testing – Roofs, floors and walls

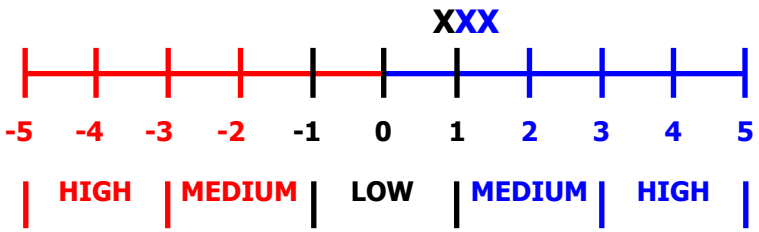
Description

Volatile organic compounds (VOCs) are toxic and adversely affect indoor air quality and occupant health. VOC's at time of manufacture, installation, and ongoing use also result in increased outdoor smog which has substantial adverse health impacts and is thus regulated under the Clean Air Act and comparable State and local statutes.

Emissions occur substantially upon product purchase, but some VOCs can continue to release over time at levels causing continued health hazards. Value and associated positive expense impacts are defined by:

- Quantifiably higher indoor air quality
- Increased occupant satisfaction, productivity and health
- Increased likelihood of higher home resale value
- Reductions to the negative externality of smog

Relative Impact



Underwriting Documentation

Analysis / confirmation of LEED or GreenPoint certification that includes this credit.

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14.5 INDOOR ENVIRONMENTAL QUALITY / VENTILATION / IAQ EFFECTIVENESS

LEED EQ-1 – ENERGY STAR w/ IAP
EQ 2 – Combustion Venting
EQ 3 – Moisture Control
EQ 4 – Outdoor Air Ventilation
EQ 5 – Local Exhaust
EQ 6 – Distribution of Space Heating and Cooling
EQ 7 – Air Filtering
EQ 8 – Contaminant Control
EQ 9 – Radon Protection
EQ 10 – Garage Pollutant Protection
Climate Neutral § 4 d – Ensuring Clean Fresh Air Flow

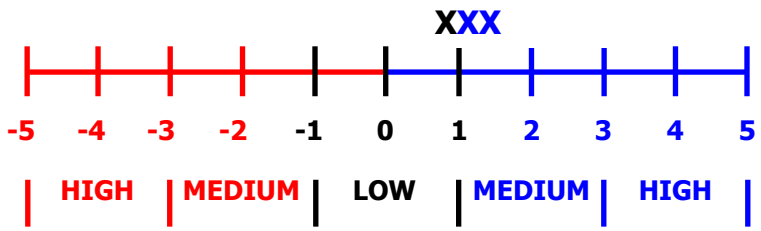
Description

These LEED credits increase clean outdoor air into the home and minimize indoor air pollution. Air recirculation in mechanical systems represents a significant health hazard in the built environment by recirculating potentially polluted air. 100% outside air intake creates a safer and healthier indoor environment by eliminating the recirculation and cross-contamination of airborne contaminants from occupants and other indoor sources.

Value and associated positive revenue impacts are defined by:

- Quantifiably higher indoor air quality
- Reduced indoor air CO2 concentrations
- Increased occupant satisfaction, productivity and health
- Increased likelihood of higher value and sale price

Relative Impact



Underwriting Documentation

- Analysis / confirmation of LEED or GreenPoint certification that includes this credit

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14.6 LEED-SS 1.2 Site Stewardship: Tree Planting and Preservation

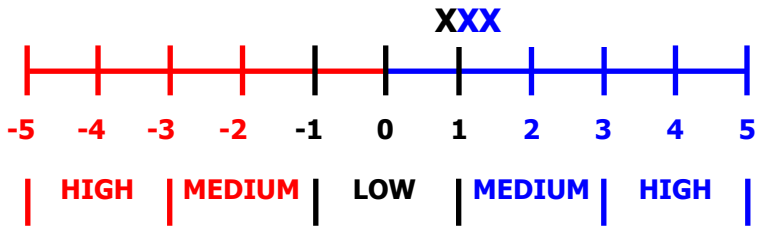
Description

This optional credit provides enhanced home aesthetic value, erosion protection, and heat island reduction. Added trees also promote climate protection.

Value and associated positive revenue impacts are defined by:

- Enhanced site beauty and value
- Lower cooling expenses from reduced heat island
- Increased likelihood of higher value and sale price

Relative Impact



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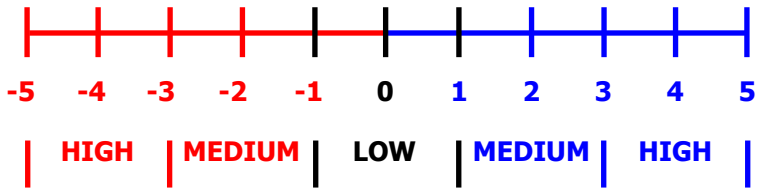
15.0 SUMMARY: RESIDENTIAL PROPERTY ATTRIBUTE ANALYSIS

Whole System Integrative Planning	XXXXXXXX
Orientation for Solar	XXXXXX
Improved Durability	XXXXXXXX
Site Selection	XXXX
Preferred Location & Infrastructure	XXXXXXX
Community Resources & Public Transportation	XXXXXXX
Heat Island	XXXX
Non Toxic Pest Control	XXXXXXXXXXXXX
Water Efficiency / Use Reduction	XXX
Energy Efficiency	XXXXXXXXXXXXXX
Onsite Renewable Energy	XXXXXXX
Energy Reduction: Hot Water & Appliances	XXXXXXX
Homeowner Education	XXXXXXX
LEED for Neighborhoods	XXX
Access to Open Space	XXX
Low VOCs	XXX
Indoor Environmental Quality	XXX
Reduced Disturbance / Tree Protection	XXX



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16.0 MANDATORY REVISION

This Standard must be updated and/or amended at minimum every four years, including a minimum review by the Capital Markets Partnership Underwriting Committee every two years.

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APPENDIX – BLANK SCORECARDS

Calculation Methodology – Residential Green Building Underwriting Standard							
	Green Point		Value Range			ADJUSTMENT	
Sorted by Factor Adjustment / Score	YES	NO	Low	High	SCORE	FACTOR	TOTAL
Non Toxic Pest Control			1	5		3	
Community Resources & Public Transport.			0	4		3	
Energy Efficiency			1	5		3	
Water Efficiency / Use Reduction			0	1		3	
Preferred Location and Infrastructure			1	3		3	
On-Site Renewable Energy			1	3		3	
Improved Durability			2	4		2	
Orientation for Solar			1	3		2	
Energy Reduction: Hot Water & Appliances			1	3		1.7	
Whole System Integrated Planning			2	4		1	
Indoor Environmental Quality			2	3		1	
Reduced Disturbance / Tree Protection			2	3		1	
Heat Island Effect			0	1		1	
Site Selection			0	1		1	
Homeowner Education			1	3		0.5	
LEED for Neighborhoods			1	2		0.5	
Access to Open Space			2	3		0.5	
Low VOC			2	3		0.5	
TOTAL POINTS							
% of Maximum Allowable		100	points maximum				

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CMP GREEN VALUE SCORE FORMULA

CMP GREEN VALUE SCORE MATRIX	Score	Value Ratio	Adjusted Score
ENERGY STAR Yardstick Score / Converted HERS Rating		40%	
Green Building Underwriting Standard Score		35%	
Climate Neutral Certified	YES	10%	
	NO	0%	
LEED or GreenPoint RATING	NONE	0%	
	CERTIFIED	2%	
	SILVER	5%	
	GOLD	10%	
	PLATINUM	15%	
CMP GREEN VALUE SCORE		100%	

HERS Rating Conversion Table	Score
100	50
90	55
80	60
70	65
60	75
50	85
40	95
39 and below	100

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CMP GREEN VALUE SCORE POINT CREDIT EVALUATION REPORT

For each point credit attested to on the Green Building Underwriting Standard, provide a brief Credit Evaluation Report for each credit with the score granted and the reasoning for that score. The following format should apply for all credits awarded – see both below and next page for examples:

Credit Description:	INSERT NAME OF CREDIT AWARDED
Score Assessed:	INSERT SCORE
Score Range:	_____Minimum to _____Maximum
Narrative:	PROVIDE WRITTEN DESCRIPTION INCLUDING RATIONALE FOR SCORE ASSESSMENT

A summary of the Credit Evaluation Report and/or cover letter should contain the following:

Property Information

Owner name
Address
City
State
Zip Code

Evaluator Company Information **(applies to company/individual signing report)**

Company Name
Address
City
State
Zip
Phone
Fax
Email

Individual Name (person attesting to report)
Signature
Date

Capital Markets Partnership
1511 Wisconsin Avenue, NW
Washington, DC 20007
202-338-3131

EXAMPLE: CMP GREEN VALUE SCORE POINT CREDIT EVALUATION REPORT

To the right is an example of a cover letter that should accompany the Credit Award Report for each credit that was granted a score on the Green Building Underwriting Standard.

Besides including the total amount of credit points awarded on the Standard, the memo should include observations on where the property can most readily achieve additional points given future actions.

CMP Green Value Score
Credit Evaluation Report

<Date>

Ms. Mary Moore
Director – Residential Lending
<Company Name>
<City>, <State> <Zip>

RE: **Whispering Meadows Apartments**
2345 Viewridge Drive
<City>, <State> <Zip>

CMP Green Value Score = 57

Dear Mary:

Attached are the Green Building Underwriting Standard Point Credit Evaluation Reports detailing each point credit awarded toward the CMP Green Value Score.

Overall, the asset scored very well and achieved 57 out of the possible 100 points.

Ways to improve the CMP Green Value Score in the future include:

- Increasing your ENERGY STAR score
- Installing onsite renewable energy
- Becoming Climate Neutral certified
- Utilizing non-toxic pest control

Please contact me with any questions regarding this report.

Sincerely,

<Name>
<Full Contact Information>

Below is an example of the information required and format to report each credit attained on the Green Building Underwriting Standard.

It is important to include this information for each credit so as to provide future field data testing opportunities and other look-back techniques valuable to the finance industry.

EXAMPLE:

Credit Description:	**Water Use Reduction – LEED WE 3.1/3.2/1.0/2.1/2.3**
Score Assessed:	**3**
Score Range:	**1** Minimum to **3** Maximum
Narrative:	The property is certified LEED Silver and achieved all LEED water credits. Observed high-efficiency toilets, faucet aerators, low-flow showerheads, EPA WaterSense appliances, and exterior drip irrigation. Recent building inspection verified no basement moisture. Awarded at high end of the range.

Credit Description:	**Preferred Location and Infrastructure – LEED**
Score Assessed:	**2**
Score Range:	**1** Minimum to **3** Maximum
Narrative:	Property situated in mature community with surrounding residential development. Once across busy street, it is ½ mile to two grocery stores, drug stores, Starbucks, six (6) restaurants and other neighborhood retail. Close to bus lines that reach mass transit.

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Washington, DC 20007
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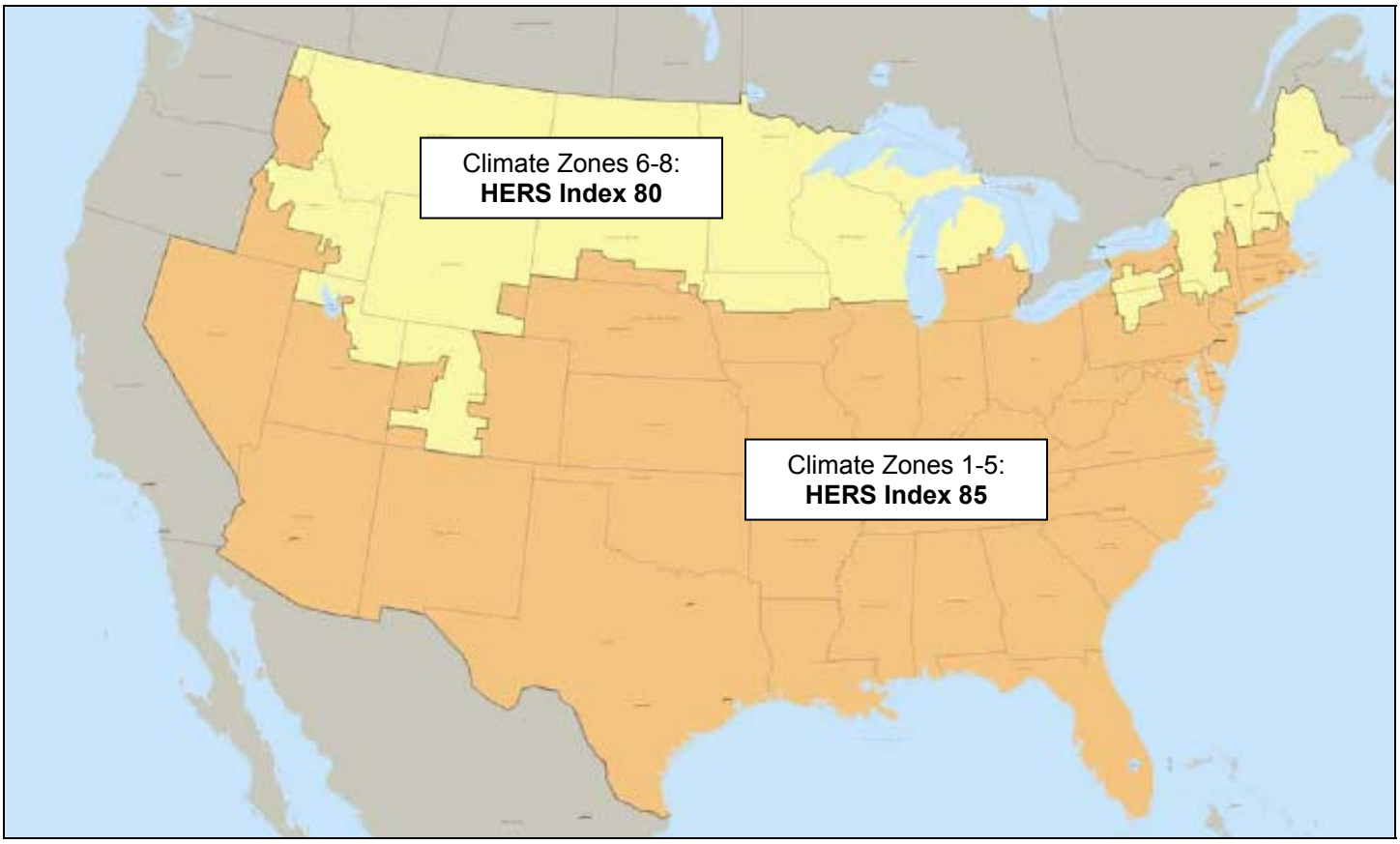
ENERGY STAR Qualified Homes
National Performance Path Requirements

ENERGY STAR Performance Requirements:

To qualify as ENERGY STAR, a home must meet the minimum requirements specified below, be verified and field-tested in accordance with the RESNET Standards by a RESNET-accredited Provider, and meet all applicable codes.

Maximum HERS Index Required to Earn the ENERGY STAR[1]



Note: Due to the unique nature of some state codes and/or climates, EPA has agreed to allow regionally-developed definitions of ENERGY STAR in California, Hawaii, and the Pacific Northwest to continue to define program requirements. The States of Montana and Idaho may use either the requirements of the national program or the regionally-developed program in the Pacific Northwest.

ENERGY STAR Mandatory Requirements:

Envelope [2,3,4]	Completed Thermal Bypass Inspection Checklist
Ductwork [5,6]	Leakage ≤ 6 cfm to outdoors / 100 sq. ft.
ENERGY STAR Products [13,14]	Include at least one ENERGY STAR qualified product category: ▪ Heating or cooling equipment [7]; OR ▪ Windows [8]; OR ▪ Five or more ENERGY STAR qualified light fixtures [9,10], appliances [11], ceiling fans equipped with lighting fixtures, and/or ventilation fans [12]
ENERGY STAR Scoring Exceptions	▪ On-site power generation may not be used to decrease the HERS Index to qualify for ENERGY STAR. ▪ A maximum of 20% of all screw-in light bulb sockets in the home may use compact fluorescent lamps (CFLs) to decrease the HERS Index for ENERGY STAR compliance. CFLs used for this purpose must be ENERGY STAR qualified.

ENERGY STAR Qualified Homes
National Performance Path Notes

1. The appropriate climate zone for each building site shall be determined by the 2004 International Residential Code (IRC), Table N1101.2. The HERS Index must be calculated in accordance with the RESNET Mortgage Industry National Home Energy Rating Standards.
2. The Thermal Bypass Inspection Checklist must be completed for homes to earn the ENERGY STAR label. The Checklist requires visual inspection of framing areas where air barriers are commonly missed and inspection of insulation to ensure proper alignment with air barriers, thus serving as an extra check that the air and thermal barriers are continuous and complete.
3. Envelope leakage must be determined by a RESNET-certified rater using a RESNET-approved testing protocol.
4. To ensure consistent exchange of indoor air, whole-house mechanical ventilation is recommended, but not required.
5. Ducts must be sealed and tested to be ≤ 6 cfm to outdoors / 100 sq. ft. of conditioned floor area, as determined and documented by a RESNET-certified rater using a RESNET-approved testing protocol. If total duct leakage is ≤ 6 cfm to outdoors / 100 sq.ft. of conditioned floor area, then leakage to outdoors does not need to be tested. Duct leakage testing can be waived if all ducts and air handling equipment are located in conditioned space (i.e., within the home's air and thermal barriers) AND the envelope leakage has been tested to be ≤ 3 ACH50 OR ≤ 0.25 CFM 50 per sq. ft. of the building envelope. Note that mechanical ventilation will be required in this situation.
6. EPA recommends, but does not require, locating ducts within conditioned space (i.e., inside the air and thermal barriers), and using a minimum of R-4 insulation for ducts inside conditioned space to prevent condensation.
7. All cooling equipment, regardless of whether it is used to satisfy the ENERGY STAR products requirement, must be sized according to the latest editions of ACCA Manuals J and S, ASHRAE 2001 Handbook of Fundamentals, or an equivalent computation procedure. Maximum oversizing limit for air conditioners and heat pumps is 15% (with the exception of heat pumps in Climate Zones 5 - 8, where the maximum oversizing limit is 25%). This can be accomplished either by the rater performing the calculations or reviewing documentation provided by the professional contractor or engineer who calculated the sizing (e.g., HVAC contractor). The following operating conditions shall be used in the sizing calculations and verified where reviewed by the rater:

   Outdoor temperatures shall be the 99.0% design temperatures as published in the ASHRAE Handbook of Fundamentals for the home's location or most representative city for which design temperature data are available. Note that a higher outdoor air design temperature may be used if it represents prevailing local practice by the HVAC industry and reflects extreme climate conditions that can be documented with recorded weather data; Indoor temperatures shall be 75^0 F for cooling; Infiltration rate shall be selected as "tight", or the equivalent term.

   In specifying equipment, the next available size may be used. In addition, indoor and outdoor coils shall be matched in accordance with ARI standards.
8. Where windows are used to meet the ENERGY STAR qualified product requirement, they shall be ENERGY STAR qualified or meet all specifications for ENERGY STAR qualified windows. Additional information can be found at www.energystar.gov/windows.
9. For the purposes of meeting the ENERGY STAR requirement, qualified lighting fixtures in the following locations cannot be counted: storage rooms (e.g., closets, pantries, sheds), or garages.
10. Efficient lighting fixtures represent a significant opportunity for persistent energy savings and a meaningful way to differentiate ENERGY STAR qualified homes from those meeting minimum code requirements. In 2008, EPA intends to propose and solicit industry comments on adding the ENERGY STAR Advanced Lighting Package (ALP) as an additional requirement for ENERGY STAR qualified homes in 2009. To learn more about the ALP, refer to www.energystar.gov/homes.
11. Eligible appliances include ENERGY STAR qualified refrigerators, dish washers, and washing machines.
12. ENERGY STAR qualified ventilation fans include range hood, bathroom, and inline fans.
13. Further efficiency and savings can be achieved by installing ENERGY STAR qualified products, in addition to those required (e.g., additional lighting, appliances, etc.). For more information, visit www.energystar.gov.
14. In homes with heat pumps that have programmable thermostats, the thermostat must have "Adaptive Recovery" technology to prevent the excessive use of electric back-up heating.

ENERGY STAR Qualified Homes Codes & Standards Information

Insulation Requirements for the National Builder Option Package

The National Builder Option Package requires that the insulation levels of a home meet or exceed Sections N1102.1 and N1102.2 of the 2004 IRC. For example, compliance may be determined by meeting the prescriptive insulation requirements listed by component below. Compliance may also be determined using U-factor alternatives or a total UA alternative as defined in Section N1102.1.2 and Section N1102.1.3. In all cases, insulation shall be inspected to Grade I installation as defined in the RESNET Standards by a RESNET-certified rater. Note that the fenestration requirements of the 2004 IRC do not apply to the fenestration requirements of the National Builder Option Package.

Climate Zone	Ceiling R-Value	Wood Frame Wall R-Value	Floor R-Value	Basement Wall R-Value	Slab R-Value & Depth	Crawl Space R-Value
1	30	13	13	0	0	0
2	30	13	13	0	0	0
3	30	13	19	0	0	5/13
4 except Marine	38	13	19	10/13	10, 2 ft.	10/13
5 and Marine 4	38	19 or 13+5	30	10/13	10, 2 ft.	10/13
6	49	19 or 13+5	30	10/13	10, 4 ft.	10/13
7 and 8	49	21	30	10/13	10, 4 ft.	10/13

Reference: 2004 International Supplement to the International Codes. Copyright 2004. Falls Church, Virginia: International Code Council, Inc. Reproduced with permission. All rights reserved. (Excerpted from 2004 IRC Table N1102.1)

Best Practices for Sizing Air Conditioners and Heat Pumps

Best practices for sizing air conditioners and heat pumps include:

- Sizing to the manufacturers' performance data;
- Sizing the equipment for the total and latent load capacities;
- Determining the auxiliary heat balance point when sizing heat pumps; and
- Considering both the cooling and heating loads in different climates when sizing heat pumps.

ENERGY STAR Products – Average Energy Savings & Key Product Criteria

Product	Average Energy Savings	Key Product Criteria
Air Conditioner	25%	SEER ≥ 14 ; EER ≥ 11.5
Heat Pump	20%	SEER ≥ 14 ; EER ≥ 11.5; HSPF ≥ 8.2
Furnace	15%	AFUE ≥ 90% (About 15% more efficient than the minimum federal efficiency standards)
Dish Washers	25%	Energy Factor ≥ 0.58: At least 25% more energy efficient than minimum Federal government standards
Clothes Washers	50%	Minimum Modified Energy Factor (MEF) of 1.42
Refrigerator	15%	At least 15% more energy efficient than the minimum Federal government standard (NAECA)

ENERGY STAR Qualified Homes
Codes & Standards Information

Product	Average Energy Savings	Key Product Criteria
Windows	ENERGY STAR Home Windows for IRC Climate Zones If IRC Climate Zone is not 2 or 4, then refer to the ENERGY STAR Window Climate Zones below	**IRC Climate Zone 4:** U-Factor ≤ 0.40; SHGC ≤ 0.45 **IRC Climate Zone 2:** U-Factor ≤ 0.55; SHGC ≤ 0.35; or U-Factor ≤ 0.56; SHGC ≤ 0.33 U-Factor ≤ 0.57; SHGC ≤ 0.32 U-Factor ≤ 0.58; SHGC ≤ 0.31 U-Factor ≤ 0.59; SHGC ≤ 0.30 U-Factor ≤ 0.60; SHGC ≤ 0.29 U-Factor ≤ 0.61; SHGC ≤ 0.28 U-Factor ≤ 0.62; SHGC ≤ 0.27 U-Factor ≤ 0.63; SHGC ≤ 0.26 U-Factor ≤ 0.64; SHGC ≤ 0.25
	Savings vary by climate region (as defined by the ENERGY STAR windows program) and home characteristics See web-site for correct selection of ENERGY STAR windows for building site	**Northern Climate Zone:** U-Factor ≤ 0.35; SHGC ≤ Any **North/Central Climate Zone:** U-Factor ≤ 0.40; SHGC ≤ 0.55 **South/Central Climate Zone:** U-Factor ≤ 0.40; SHGC ≤ 0.40; or U-Factor≤ 0.41; SHGC ≤ 0.36 U-Factor≤ 0.42; SHGC ≤ 0.31 U-Factor≤ 0.43; SHGC ≤ 0.24 **Southern Climate Zone:** U-Factor ≤ 0.65; SHGC ≤ 0.40; or U-Factor≤ 0.66; SHGC ≤ 0.39 U-Factor≤ 0.67; SHGC ≤ 0.39 U-Factor≤ 0.68; SHGC ≤ 0.38 U-Factor≤ 0.69; SHGC ≤ 0.37 U-Factor≤ 0.70; SHGC ≤ 0.37 U-Factor≤ 0.71; SHGC ≤ 0.36 U-Factor≤ 0.72; SHGC ≤ 0.35 U-Factor≤ 0.73; SHGC ≤ 0.35 U-Factor≤ 0.74; SHGC ≤ 0.34 U-Factor≤ 0.75; SHGC ≤ 0.33 http://www.energystar.gov/index.cfm?c=windows_doors.pr_crit_windows
Thermostat	Savings depend on homeowner use	Shipped with a default energy saving program that is capable of maintaining two separate programs and four temperature settings or more for each day
Ventilating Fans	65%	**Range hoods (up to 500 cfm):** maximum allowable sound level of 2.0 sones; minimum efficacy level of 2.8 cfm/Watt **Bathroom fans (10 to 80 cfm):** maximum allowable sound level of 2.0 sones; minimum efficacy level of 1.4 cfm/Watt; minimum rated airflow at 0.25 static w.g. 60% of 0.1 static w.g. airflow **Bathroom fans (90 to 130 cfm):** maximum allowable sound level of 2.0 sones; minimum efficacy level of 2.8 cfm/Watt; minimum rated airflow at 0.25 w.g. 70% of 0.1 static w.g. airflow **Bathroom fans (140 to 500 cfm):** maximum allowable sound level of 3.0 sones; minimum efficacy level of 2.8 cfm/Watt; minimum rated airflow at 0.25 w.g. 70% of 0.1 static w.g. airflow Light sources must use pin-based fluorescent technology Warranty provided must be a minimum of 1 year
Lighting	66%	http://www.energystar.gov/index.cfm?c=lighting.pr_lighting
Ceiling Fans	Savings depend on homeowner use	http://www.energystar.gov/index.cfm?c=ceiling_fans.pr_ceiling_fans

SUPPORTING SUSTAINABLE INVESTMENT INITIATIVE

Sponsored by:

Hon. Gavin Newsom
Mayor, City & County of San Francisco

Hon. Richard Daley
Mayor, City of Chicago

Hon. Chuck Reed
Mayor of San Jose

Hon. Manuel A. Diaz
Mayor of Miami
President, US Conference of Mayors

Adopted at the 76th Annual Meeting of the US Conference of Mayors
June 20-24, 2008
Miami, FL

WHEREAS, the Intergovernmental Panel on Climate Change, the international community's respected assembly of scientists, has found that human activities are largely responsible for increasing concentrations of greenhouse gas pollutants in the atmosphere and resulting climate change; and

WHEREAS, the U.S. Conference of Mayors has taken action to combat climate change, including the establishment of the U.S. Conference of Mayor's Climate Protection Agreement, signed by over 830 mayors representing over 79 million Americans; and

WHEREAS, the U.S. building sector is responsible for 48 percent of greenhouse gas emissions in the United States, according to the U.S. Energy Information Administration; and

WHEREAS, the U.S. Conference of Mayors and the American Institute of Architects have called for immediate energy reduction of all new and renovated buildings to one-half the national average for that building type, with increased reductions of 10 percent every five years so that by the year 2030 all new buildings will be carbon neutral; and

WHEREAS, federal, state and local governments have adopted green building standards for construction of public buildings and many jurisdictions are now expanding green building standards to commercial and residential buildings in their communities; and

WHEREAS, public-private partnerships that utilize market mechanisms to advance green building activity in the US are essential to ensure that environmental building standards can be raised while at the same time growing our national economy; and

WHEREAS, major investment banks, institutional investors and governments, led by the City and County of San Francisco and JPMorgan Chase, have worked together to advance the Capital Markets Partnership's Sustainable Investment Initiative that will generate unprecedented market investment in green buildings constructed in the US; and

WHEREAS, this partnership has completed a peer reviewed report called 'Creating Economic Stimulus While Stopping Climate Credit Risk / Irreversibility' that demonstrates that climate induced property damages have caused increases of 100 to 600 percent in insurance rates and also reduced availability of coverage, and have caused rating agencies to conclude that these developments have "serious credit implications"; and

WHEREAS, this report identifies investment products, including mortgage-backed securities exclusively for green buildings, that can be developed to increase investment in green buildings, decrease credit risk in the current investment environment, and help to decrease greenhouse gas emissions from the U.S. building industry; and

WHEREAS, the Partnership will be launching the Green Building Investment Underwriting Standards and Sustainable Mortgage Backed Securities initiatives at the New York Stock Exchange, which will generate investments projected to assist in the building of over two million green buildings and one million certified sustainable products by 2015, add one trillion dollars per year to the economy, and stop/prevent imminent, irreversible and dangerous climate change,

NOW, THEREFORE, BE IT RESOLVED, that the U.S. Conference of Mayors supports the efforts of the Capital Markets Partnership's Sustainable Investment Initiative to generate market investment in high performance green buildings through Sustainable Mortgage Backed Securities that will stimulate the economy and combat climate change, and

BE IT FURTHER RESOLVED, that the U.S. Conference of Mayors encourages additional public-private partnerships to increase market investment in environmental innovation and climate protection.

INTRODUCTION TO GREENPOINT RATED EXISTING HOME RATING SYSTEM

Introduction

With 70% of California's home stock built prior to 1980 and the adoption of the California Title 24 energy code, the need to upgrade existing homes is enormous. Fortunately, there is a lot of movement in this direction statewide, especially related to energy upgrades and weatherization of existing homes.

In its continued effort to promote healthy, energy and resource-efficient buildings in California, Build It Green, a professional non-profit membership organization, launched GreenPoint Rated Existing Home in July 2008. It is the first comprehensive green building rating system of its kind in the nation. The program will be tied to a climate calculator, quantifying such benefits as GHG emission reductions, water savings and waste diversion.

GreenPoint Rated Existing Home is modeled after GreenPoint Rated New Home, the third party rating system in use since late 2006. The GreenPoint Rated Existing Home is graded on the same five categories—Energy Efficiency, Resource Conservation, Indoor Air Quality, Water Conservation and Community.

Energy modeling matches the California Energy Commission's HERS Phase II protocols for evaluation of existing homes. The energy evaluation is also compatible with national standards, including Home Performance with Energy Star (HPwES) and Building Performance Institute (BPI). The rating system is available for homes of all vintages: existing or undergoing remodeling. Fashioned after the New Home Rating System, Existing Home is designed with an accessible entry point and provides a pathway for increased performance in all categories. To facilitate this accessibility, the Existing Home Rating System has two tiers: Whole House label and Elements label.

With current legislative efforts focusing on energy upgrades of existing homes, GreenPoint Rated offers a trusted pathway to improve homes with quantifiable results for energy efficiency, reduced greenhouse gas emissions, water savings and more. Benefits an be applied to meet State requirement under AB32. Additionally, lenders are looking at GreenPoint Rated's field verification process as a platform for green loans and jurisdictions can look to GreenPoint Rated to evaluate the financing of upgrades to existing homes through AB811.

To example the benefits of GreenPoint Rated Existing Home, a pre-1980 home qualifying for the GreenPoint Rated Whole House label will achieve a minimum of a 37% energy efficiency upgrade over the pre-1980 existing conditions. Homes qualifying for the Elements label are likely to see a minimum of a 5 – 10% increase in energy efficiency.

Whole House homes will see water savings through such requirements to upgrade water fixtures to a minimum of current code. To obtain either the Elements or Whole House label, the home must be checked and corrected for plumbing leaks

The discussion that follows will provide you with the following information:

- An overview of the GreenPoint Rated Existing Home Rating System
- Rating System requirements
- Home energy evaluation
- Verification methodology
- The role of the GreenPoint Rater

INTRODUCTION TO GREENPOINT RATED EXISTING HOME RATING SYSTEM

The Existing Home Pathway – Overview

GreenPoint Rated Existing Home offers a pathway for sustainable home improvement. Most home remodels involve sections of the home and do not always alter the entire home at one time. A major objective of the Existing Home Rating System is to educate homeowners about the benefits of green remodeling and to provide recommendations on making improvements.

Depending on a home's current energy performance and the extent of green home improvements, it will receive either an Elements or a Whole House consumer label.

An Elements label is granted to homes that meet five basic requirements in four environmental categories and are on track to make additional improvements over time. A Whole House label is awarded to homes that meet more extensive requirements and have made comprehensive green improvements. The Elements rating differs from the Whole House rating in two distinct ways: fewer minimum requirements and an optional prescriptive pathway for energy efficiency credit.

Rating System Requirements

GreenPoint Rated Existing Home is a point-based rating system. Qualifications for GreenPoint Rated Existing Home include:

- Point thresholds in four environmental categories (energy efficiency, indoor air quality, resource conservation and water conservation)
- Minimum overall point thresholds:
  - 25 points for the Elements label (capped at 49 points)
  - 50 points for the Whole House label
- Basic home integrity requirements

The Criteria for Qualification for each of these measures is described in the GreenPoint Rated Existing Home Rating Manual.

The requirements for the Elements label are:

A2a. Recycle All Cardboard, Concrete, and Metals

G4. Plumbing System Integrity and No Plumbing Leaks

H1a. Visual Evaluation of HVAC Equipment Installation

H13. Combustion Safety Backdraft Test

J1. Energy Survey and Education (prescriptive method) or

J3a. Meet Energy Budget for Home Based on Year (performance method)

N1. Incorporate GreenPoint Checklist in Blueprints or Distribute Checklist

The required minimum points in each of the categories are:

Energy-	8 points
IAQ/ Health-	2 points
Resources-	2 points
Water-	4 points

Additional measures are necessary to meet the minimum overall point threshold of 25 points.

The more extensive requirements for the Whole House rating are:

A2a. Recycle All Cardboard, Concrete, and Metals (if a remodel is underway)

B2. Moisture Source Verification and Correction

D9. Sound Exterior Assemblies

G3a. All Plumbing Fixtures Meet Federal Energy Policy Act (Toilets: 1.6 gpf max, Sinks: 2.2 gpm, Showers: 2.5 gpm)

G4. Plumbing System Integrity and No Plumbing Leaks

H1a. Visual Evaluation of HVAC Equipment Installation

H12a. Carbon Monoxide Testing and Correction

H13. Combustion Safety Backdraft Test

J3a. Meet Energy Budget for Home

M6. Electrical Survey

N1. Incorporate GreenPoint Checklist in Blueprints or Distribute Checklist

The required minimum points in each of the categories are:

Energy- 20 points

IAQ/ Health- 5 points

Resources- 6 points

Water- 8 points

Additional measures are necessary to meet the minimum overall point threshold of 50 points.

The home integrity requirements are intended to address the basic integrity of the home without being onerous. An initial evaluation of the home is recommended to assess viability for the program. Any work required to meet the requirements and not already anticipated for the home should be highlighted and provided to the homeowner. Contractor and/or design assessment may be required by the homeowner.

Energy Consumption Evaluation

All homes participating in GreenPoint Rated Existing Home Rating System must meet energy requirements. To ensure the accessibility of the program and encourage energy upgrades, both a prescriptive and performance pathway for energy requirements have been incorporated. Either the prescriptive or performance approach is available for the Elements label, while the performance method is required for the Whole House label. Both labels are compatible with Home Performance with Energy Star (HPwES).

The prescriptive approach (available for the Elements label) requires that a home must undergo an energy survey consisting of a blower door test of the home and a visual inspection of the HVAC system, ducts and building envelope. Using this method, home can receive credit for prescriptive energy upgrades such as added insulation, tight ducts and energy efficient appliances.

The performance method (available for either label) requires a comprehensive energy evaluation and upgrade. To meet the comprehensive performance approach for either Elements or the Whole House label, a home must meet or beat an energy budget based on the GreenPoint Rated Existing Home Energy Thresholds for its age. Points are given for performance metrics; meeting the budget, with additional points for exceeding the energy budget. There are four Energy Vintage

Threshold (see Attachment A) categorized by standard construction practices of different eras: pre-1980, 1980-2000, 2001 energy code and 2005 energy code.

The home is modeled using the California Energy Commission approved software package for HERS Phase II protocols, comparable to those designed to calculate Title 24 requirements for new homes. Individual upgrades to the exterior envelope (such as added insulation) and the mechanical system (such as duct leakage) are not awarded individual points but rather are inputs into the modeling software. These protocols include inputs for some appliance and lighting loads. They closely match the HERS index system used nation wide with the exception of the use of TDV (Time Dependent Valuation) evaluations.

Verification of Voluntary Measures

Whenever possible, verification protocols have remained consistent with those used for GreenPoint Rated New Home while including some different procedures that accommodate the circumstances of an existing home. The new home protocols are generally usable in portions of the home undergoing current remodeling. Means for verification of existing components include: paper documentation (invoices, purchase orders, etc), visual verification and/ or testing procedures. Existing components may or may not be verifiable. Existing components not verifiable shall not be available for points.

Allocation of Voluntary Measures Used In Portions of Home

Some measures can be awarded points allocated by the percentage based on the occurrence of the measure in the home. In other words, the measure may appear in some areas of the home and be absent in other areas. Not all measures are available for allocation. If the measure is available for allocation, the Rater shall determine the percent of the total home square footage in which the measure appears. Points will be awarded based on this percentage. The measure or practice must be found in at least 10% of the home to earn points. The percentages are predetermined and include: 10%, 25%, 50%, 75% and >90%. The calculated percentage should be rounded down. For example, if low VOC is used in 20% of the home, 10% of the available points will be awarded for that measure.

Qualifying Homes and Additional Information

Elements

Typically, the Elements label is available to homes in the following situation:

- A portion of the home is undergoing a remodeled or addition (i.e. a kitchen remodel or master bedroom addition). The entire home will not be evaluated for green building practices.
- The homeowner anticipates qualifying for GreenPoint Rated Whole House over time and wants to verify sections under current remodeling.
- The home is undergoing energy upgrades that do not encompass the requirements to meet GreenPoint Rated Whole House

The home qualifying for an Elements rating will receive:

- An Elements Certificate of Evaluation with a total point score (capped at 49 points)
- Information on resources (green house gas emission reductions, water savings and waste diversion) saved by the home upgrades

- Information recommending energy improvements to the home or An energy report providing the energy use of the home, relative % improvement , and a HERS index number compatible with that being developed by the CEC
- Information indicating green measures already taken and the additional requirements and points needed to qualify for a Whole House rating.
- A consumer label showing progress towards a Whole House rating

Whole House

A Whole House rating should be used in the following situations:

- The homeowner has completed updates over time.
- The homeowner is in the process of completing a significant remodel
- The home was built recently, but was not able to apply for GreenPoint Rated New Home Single Family
- The homeowner is completing a gut remodel and replacing all the systems.

A Whole House rating cannot be used in the following situations:

- The home is newly built and has never been occupied.

Homes qualifying for the Whole House rating will receive:

- A Certificate of Evaluation with a total point score and performance in the environmental categories
- An energy report providing:
  - The energy use of the home
  - Relative % improvement
  - A HERS index number compatible with that being developed by the CEC
  - A Whole House consumer label displaying point values in each category
- Information on resources (green house gas emission reductions, water savings and waste diversion) saved based on the measures achieved

An educational brochure about green remodeling has been developed to provide to homeowners.

Role of the Rater in GreenPoint Rated Existing Home

For Existing Home Rating System it will be necessary for the rater to educate clients about the Rating System, the process, verifications and requirement. The Rater may also need to coordinate with other parties including remodeling contractor and subs and home performance contractors.

The Rater must have experience in the following:

- HERS testing experience, including exterior envelope, duct testing, insulation type and density, air flow, EER values, etc or Home performance testing and evaluation
- Construction knowledge of current and older construction methods
- Basic building science knowledge

Conflict of Interest for the GreenPoint Rater Existing Home

The GreenPoint Rater must maintain third-party status. The following policies must be adhered to.

- A home performance contractor and the GreenPoint Rater can be one and the same if the home performance contractor is completing testing only and is not conducting any work.
- A home performance contractor and the GreenPoint Rater can not be one and the same if the home performance contractor is completing work on the subject property. Protocols are detailed in the GreenPoint Rated Existing Home Rating Manual.

GreenPoint Rated Existing Home Energy Vintage Thresholds

A home qualifying for the Whole House label must meet or beat the Energy Budget based on a Vintage Threshold for its age.

	Pre-1980	1980 - 2000	2001 - 2005	2005 +
Conditioned Floor Area	Actual	Actual	10% Better than House with 2001 Prescriptive Package Measures	10% Better than House with 2005 Prescriptive Package Measures
Single or Two Story	Actual	Actual		
Floor (Raised Floor or Slab)	Actual	Actual		
Average Ceiling Height	Actual	Actual		
Insulation				
Roof/Attic	R-30 / R-38[1]	R-30 / R-38[1]		
Walls	Actual	R-13		
Raised Floors	R-19	R-19		
Slab	Actual	Actual		
Glazing				
Percentage (floor area)	Actual	Actual		
U-Factor	0.99	0.79		
SHGC	0.74	0.70		
HVAC				
Heating				
Gas (AFUE)	0.90	0.90		
Electric (HSPF)	8.8	8.8		
Cooling (if any)				
SEER	14.0	14.0		
EER	11.5	11.5		
Ducts (if ducted system)				
Insulation	R-6 or 8[2]	R-6 or 8[2]		
Leakage (% airflow)	15%	15%		
Water Heating	Actual	Actual		
Infiltration (ACH)	0.5	0.5		
Other Conservation Features				
Thermostat	Programmable	Programmable		

1. Attic Insulation: R-30 Climate Zones 2 - 10, R-38 Climate Zones 1, 11-16

2. Duct Insulation: R-6 Climate Zones 2 - 10, R-8 Climate Zones 1, 11-16

GreenPoint Rated Existing Home Checklist

Build It Green
Smart Solutions From The Ground Up

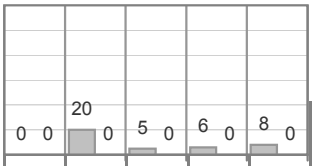
The GreenPoint Rated checklist tracks green features incorporated into the home. This checklist is used to track projects seeking a Whole House or Elements Rating using the GreenPoint Rated Existing Home Rating System. The minimum requirements for a green home seeking the Whole House Rating are listed in the project summary at the end of this checklist. Selected measures can be awarded points allocated by the percentage of presence of the measure in the home. Not all measures are available for allocation. The measure or practice must be found in at least 10% of the home to earn points.

Enter Label: **Whole House**

Points Achieved:

The green building practices listed below are described in the GreenPoint Rated Existing Home Rating Manual and the Home Remodeling Guidelines available at www.builditgreen.org. Build It Green is a non-profit organization providing the GreenPoint Rated program as a public service. Build It Green encourages local governments to leverage program resources to support voluntary, market-based programs and strategies.

GreenPoint Rated Existing Home Checklist v. 1.2



Project Name	Points Achieved	Community	Energy	IAQ/Health	Resources	Water
AA. COMMUNITY		Possible Points				
1. Infill Site						
a. Home is Located in a Built Urban Setting with Utilities in Place		1			1	
b. Home is Located within 1/2 Mile of a Major Transit Stop		2				
2. Compact Development & House Size						
a. Density of 10 Units per Acre or Greater **(Enter units/acre)**		2			2	
b. Home Size Efficiency **(5 points is average, points awarded based on home size)**					1--10	
3. Pedestrian and Bicycle Access/ Alternative Transportation						
a. Site has Pedestrian Access Within ½ Mile of neighborhood services:						
TIER 1: 1) Day Care 2) Community Center 3) Public Park						
4) Drug Store 5) Restaurant 6) School						
7) Library 8) Farmer's Market 9) After School Programs						
10) Convenience Store Where Meat & Produce are Sold						
TIER 2: 1) Bank 2) Place of Worship 3) Laundry/Cleaners						
4) Hardware 5) Theater/Entertainment 6) Fitness/Gym						
7) Post Office 8) Senior Care Facility 9) Medical/Dental						
10) Hair Care 11) Commercial Office of Major Employer 12) Full Supermarket						
5 Services Listed Above (Tier 2 Services count as 1/2 Service Value)		1				
10 Services Listed Above (Tier 2 Services count as 1/2 Service Value)		1				
b. Access to A Dedicated Pedestrian Pathway to Places of Recreational Interest within 1/2 Mile		1				
c. At Least Two of the Following Traffic-Calming Strategies Installed within 1/4 mile:		1				
Designated Bicycle Lanes are Present on Roadways;						
Ten-Foot Vehicle Travel Lanes;						
Street Crossings Closest to Site are Located Less Than 300 Feet Apart;						
Streets Have Rumble Strips, Bulbouts, Raised Crosswalks or Refuge Islands						
4. Safety & Social Gathering						
a. Front Entrance Has Views from the Inside to Outside Callers		1				
b. Front Entrance Can be Seen from the Street and/or from Other Front Doors		1				
c. Porch (min. 100sf) Oriented to Streets and Public Spaces		1				
5. Diverse Households						
a. Home Has at Least One Zero-Step Entrance		1				
b. All Main Floor Interior Doors & Passageways Have a Min. 32-Inch Clear Passage Space		1				
c. Home includes at Least a Half-Bath on the Ground Floor with Blocking for Grab Bars		1				
d. Lot Includes Full-Function Independent Rental Unit		1				
Total Points Available in Community = 29						

Project Name	Points Achieved	Community	Energy	IAQ/Health	Resources	Water
A. SITE		Possible Points				
	1. Protect Existing Topsoil from Erosion and Reuse after Construction	1				1
	2. Divert Construction and Demolition Waste					
	a. Divert All Cardboard, Concrete, Asphalt and Metals **(Required for both Whole House and Elements, if Applicable)**				R	
	b. Deconstruct for Reuse **(Enter Number of Points, up to 2 points)** 1) Appliances, 2) Brick, tile, masonry, 3) Cabinetry, 4) Countertops, 5) Doors, 6) Fixtures (plumbing, lighting, etc), 7) Sinks/Tubs, 8) Toilets (1.6 only), 9) Windows, 10) Wood - (2x4, flooring, form boards)				2	
	c. Divert 25% C&D Waste Excluding All Cardboard, Concrete, Asphalt and Metals				2	
	3. Construction IAQ Management Plan			2		
	Total Points Available in Site = 8					
B. FOUNDATION		**Possible Points**				
	1. Replace Portland Cement in Concrete with Recycled Flyash or Slag					
	a. Minimum 20% Flyash and/or Slag Content				1	
	b. Minimum 30% Flyash and/or Slag Content				1	
	2. Moisture Source Verification and Correction (Required for Whole House)			R	R	
	3. Retrofit Crawl Space to Control Moisture					
	a. Control Ground Moisture with Vapor Barrier			2		
	b. Foundation Drainage System				2	
	4. Pest Inspection and Correction				1	
	5. Design and Build Structural Pest Controls					
	a. Install Termite Shields & Separate All Exterior Wood-to-Concrete Connections by Metal or Plastic Fasteners/Dividers				1	
	b. All New Plants Have Trunk, Base, or Stem Located At Least 36 Inches from Foundation				1	
	6. Radon Testing and Correction or Radon Resistant Construction			1		
	Total Points Available in Foundation = 10					
C. LANDSCAPE		**Possible Points**				
	Is the landscape area is <15% of the total site area? (only 3 points available in this section for projects with <15% landscape area)					
	1. Resource-Efficient Landscapes					
	a. No Invasive Species Listed by Cal-IPC Are Planted					1
	b. No Plant Species Require Shearing				1	
	c. 50% of Plants Are California Natives or Mediterranean Cimate Species					3
	2. Fire-Safe Landscaping Techniques	1				
	3. Minimal Turf Areas					
	a. Turf Not Installed on Slopes Exceeding 10% or in Areas Less than 8 Feet Wide					2
	b. Turf is <33% of Landscaped Area					2
	c. Turf is <10% of Landscaped Area or eliminated					2
	4. Shade Trees Planted	1	1			1
	5. Plants Grouped by Water Needs (Hydrozoning)					2
	6. High-Efficiency Irrigation Systems Installed					
	a. System Uses Only Low-Flow Drip, Bubblers, or Low-flow Sprinklers					2
	b. System Has Smart Controllers					3
	7. Compost and Recycle Garden Trimmings on Site					1
	8. Mulch in All Planting Beds to the Greater of 2 Inches or Local Water Ordinance Requirement					2
	9. Use Environmentally Preferable Materials for Non-Plant Landscape Elements				1	
	10. Light Pollution Reduced by Shielding Fixtures and Directing Light Downward	1				
	11. Rain Water Harvesting System (1 point for ≤ 350 gallons, 2 points for > 350 gallons)					
	a. ≤ 350 gallons					1
	b. > 350 gallons					1
	12. Soil Amended with Compost				1	1
	Total Points Available in Landscape = 31					

Project Name	Points Achieved	Community	Energy	IAQ/Health	Resources	Water
D. STRUCTURAL FRAME & BUILDING ENVELOPE		**Possible Points**				
1. Optimal Value Engineering						
a. Place Rafters & Studs at 24-Inch On Center Framing					1	
b. Size Door & Window Headers for Load					1	
c. Use Only Jack & Cripple Studs Required for Load					1	
2. Use Engineered Lumber						
a. Engineered Beams & Headers					1	
b. Insulated Headers			1			
c. Wood I-Joists or Web Trusses for Floors					1	
d. Wood I-Joists for Roof Rafters					1	
e. Engineered or Finger-Jointed Studs for Vertical Applications					1	
f. Oriented Strand Board for Subfloor					1	
g. Oriented Strand Board Wall and Roof Sheathing					1	
3. FSC Certified Wood						
a. Dimensional Lumber, Studs, and Timber					4	
b. Panel Products					2	
4. Solid Wall Systems (includes SIPs, ICFs, & Any Non-Stick Frame Assembly)						
a. Floors			2		2	
b. Walls			2		2	
c. Roofs			2		2	
5. Reduce Pollution Entering the Home from the Garage						
a Tightly Seal the Air Barrier between Garage and Living Area				1		
b. Install Garage Exhaust Fan OR Have a Detached Garage				1		
6. Energy Heels on Roof Trusses (75% of Attic Insulation Height at Outside Edge of Exterior Wall)			1			
7. Overhangs and Gutters						
a. Minimum 16-Inch Overhangs and Gutters					1	
b. Minimum 24-Inch Overhangs and Gutters			1			
8. Retrofit/ Upgrade Structure for Lateral Load Reinforcement for Wind or Seismic						
a. Partial Lateral Load Reinforcement Upgrades/ Retrofits					1	
b. Lateral Load Reinforcement Upgrades/ Retrofits for Entire home					2	
9. Sound Exterior Assemblies (Required for Whole House)			R		R	
Total Points Available in Structural Frame & Building Envelope = 36						
E. EXTERIOR FINISH		**Possible Points**				
1. Recycled-Content (No Virgin Plastic) or FSC-Certified Wood Decking					2	
2. Rain Screen Wall System Installed					2	
3. Durable & Noncombustible Siding Materials					1	
4. Durable & Fire-Resistant Roofing Materials					2	
Total Points Available in Exterior Finish = 7						
F. INSULATION		**Possible Points**				
1. Insulation with 75% Recycled Content						
a. Walls and Floors					1	
b. Ceilings					1	
2. Low-Emitting Insulation (Certified CA Section 01350)						
a. Walls and Floors				1		
b. Ceilings				1		
3. Inspect Quality of Insulation Installation before Applying Drywall			1			
Total Points Available in Insulation = 5						

Project Name	Points Achieved	Community	Energy	IAQ/Health	Resources	Water
G. PLUMBING		**Possible Points**				
	1. Distribute Domestic Hot Water Efficiently					
	a. Insulate All Accessible Hot Water Pipes		1			1
	b. Locate Water Heater Within 12' Of All Water Fixtures, as measured in plan		1			1
	c. Install On-Demand Circulation Control Pump		1			1
	2. High-Efficiency Toilets (Dual-Flush or ≤ 1.28 gpf)				1	2
	3. Water Efficient Fixtures					
	a. All Fixtures Meet Federal Energy Policy Act (Toilets: 1.6 gpf, Sinks: 2.2 gpm, Showers: 2.5 gpm) **(Required For Whole House)**					R
	b. High-Efficiency Showerheads Use ≤ 2.0 gpm at 80 psi		1			1
	c. Bathrooms Faucets Use ≤ 1.5 gpm		1			1
	4. Plumbing System Integrity and No Plumbing Leaks (Required for Whole House and Elements)					R
	Total Points Available in Plumbing = 13					
H. HEATING, VENTILATION & AIR CONDITIONING		**Possible Points**				
	1. General HVAC Equipment Verification and Correction					
	a. Visual Survey of Installation of HVAC Equipment **(Required for Whole House and Elements)**		R			
	b. Conduct Diagnostic Testing to Evaluate System		2			
	c. Conduct Flow Hood Test and Assess Delivery of Air		1			
	d. Air Conditioning Compressor Operates Properly and Refrigerant Charge is Optimal		1			
	2. Design and Install HVAC System to ACCA Manuals J, D and S		4			
	3. Sealed Combustion Units					
	a. Furnaces			2		
	b.Water heaters			2		
	4. Zoned, Hydronic Radiant Heating		1	1		
	5. High Efficiency Air Conditioning Air conditioning with Environmentally Responsible Refrigerants	1				
	6. Effective Ductwork Installation					
	a. New Ductwork and HVAC unit Installed Within Conditioned Space		1			
	b. Duct Mastic Used on All Ducts, Joints and Seams		1			
	c. Ductwork Installed under Attic Insulation (Buried Ducts)		1			
	d. Ductwork System is Pressure Relieved		1			
	7. High Efficiency HVAC Filter (MERV 6+)			1		
	8. No Fireplace OR Sealed Gas Fireplaces with Efficiency Rating ≥60% using CSA Standards			1		
	9. Effective Exhaust Systems Installed in Bathrooms and Kitchens					
	a. ENERGY STAR Bathroom Fans Vented to the Outside			1		
	b. All Bathroom Fans are on Timer or Humidistat			1		
	c. Kitchen Range Hood Vented to the Outside			1		
	10. Mechanical Ventilation System for Cooling Installed					
	a. ENERGY STAR Ceiling Fans & Light Kits in Living Areas & Bedrooms		1			
	b. Whole House Fan		1			
	11. Mechanical Ventilation for Fresh Air Installed					
	a. Any Whole House Ventilation System (that meets ASHRAE 62.2)			2		
	b. Install Air-to-Air Heat Exchanger (that meets ASHRAE 62.2)		1	2		
	12. Carbon Monoxide					
	a. Carbon Monoxide Testing and Correction **(Required for Whole House)**			R		
	b. Carbon Monoxide Alarm(s) Installed			1		
	13. Combustion Safety Backdraft Test (Required for Whole House and Elements)			R		
	Total Points Available in Heating, Ventilation and Air Conditioning = 33					
I. RENEWABLE ENERGY		**Possible Points**				
	1. Solar Water Heating System		4			
	2. Photovoltaic (PV) System that offsets electric energy use by:					
	a. 30% of electric needs OR 1.2 kW		6			
	b. 60% of electric needs OR 2.4kW		6			
	c. 90% of electric needs OR 3.6 kW		6			
	Total Points Available in Renewable Energy = 22					

Project Name	Points Achieved	Community	Energy	IAQ/Health	Resources	Water
J. BUILDING PERFORMANCE			**Possible Points**			
	1. Energy Survey and Education (includes blower door test) (Required for Elements or Meet J3a)			**R**			
	2. Energy Upgrades (Available for Elements Rating Only, Mutually exclusive with J3a. Two points minimum for credit, maximum 6 points)			**R**			
	TIER 1: Practices in Tier 1 Are Worth Full Value (1 point)						
	a) Attic Insulation up to or Exceeding Current Code			1			
	b) Crawl Space Insulation up to or Exceeding Current Code			1			
	c) Wall Insulation up to or Exceeding Current Code			1			
	d) High Efficiency Furnace (90% AFUE Minimum)			1			
	e) Seal Ducts and Duct Leakage is <15%			1			
	f) 14 SEER, 11.5 EER Air Conditioning Unit (in climate zones 2,4,8-15)			1			
	g) House Passes Blower Door Test With ≤0.5 ACH or a 50% Improvement			1			
	TIER 2: Practices in Tier 2 Are Worth Half Value (0.5 points)						
	h) High Efficiency Water Heater ≥.62EF			0.5			
	i) Radiant Barrier in Attic			0.5			
	j) Windows Upgraded to Current Code Requirements, Which are Typically Dual Pane			0.5			
	k) Duct insulation to Code			0.5			
	l) Programmable Thermostat			0.5			
	m) 14 SEER, 11.5 EER Air Conditioning unit (in climate zones 1,3,5,6,7,16)			0.5			
	3. Energy Budget for Home Based on Year						
	a. Meet Energy Budget for Home Based on Year (Includes Blower Door Test) **(Required for Whole House, Available for Elements)**			**10**			
	b. Energy Budget Compared to Current Code **(Enter Number of Points)**			1+			
	4. Comprehensive Utility Bill Analysis			1			
	Total Points Available in Building Performance = 31+						
K. FINISHES			**Possible Points**			
	1. Entryways Designed to Reduce Tracked in Contaminants				1		
	2. Low/No-VOC Paint						
	a. Low-VOC Interior Wall/Ceiling Paints (<50 gpl VOCs regardless of sheen)				1		
	b. Zero-VOC: Interior Wall/Ceiling Paints (<5 gpl VOCs (flat))				2		
	3. Coatings Meet SCAQMD Rule 1113 for Low VOCs				2		
	4. Low-VOC Caulks & Construction Adhesives (Meet SCAQMD Rule 1168)				2		
	5. Recycled-Content Paint					1	
	6. Environmentally Preferable Materials for Interior Finish: A) FSC Certified Wood B) Reclaimed Materials C) Rapidly Renewable D) Recycled-Content E) Finger-Jointed or F) Local						
	a. Cabinets					1	
	b. Interior Trim					1	
	c. Shelving					1	
	d. Doors					1	
	e. Countertops					1	
	7. Formaldehyde Redcued in Interior Finish (CA Section 01350)						
	a. Subfloor & Stair Treads				1		
	b. Cabinets & Countertops				1		
	c. Interior Trim				1		
	d. Shelving				1		
	8. After Installation of Finishes, Test of Indoor Air Shows Formaldehyde Level <27ppb				3		
	Total Points Available in Finishes = 22						
L. FLOORING			**Possible Points**			
	1. Environmentally Preferable Flooring: A) FSC-Certified Wood B) Reclaimed or Refinished C) Rapidly Renewable D) Recycled-Content, E) Exposed Concrete F) Local ***Flooring Adhesives Must Have <70 gpl VOCs and sealer must meet SCAQMD Rule 1113.***					4	
	2. Thermal Mass Floors			1			
	3. Flooring Meets CA Section 01350 or CRI Green Label Plus Requirements				2		
	Total Points Available in Flooring = 7						

Project Name	Points Achieved	Community	Energy	IAQ/Health	Resources	Water
M. APPLIANCES AND LIGHTING		**Possible Points**				
	1. Water and Energy Efficient Dishwasher Installed					
	a. ENERGY STAR **(Mutually Exclusive with J3a)**		1			
	b. Dishwasher Uses No More Than 6.5 Gallons/Cycle					1
	2. ENERGY STAR Clothes Washing Machine with Water Factor of 6 or Less					
	a. Meets CEE Tier 2 Requirements (Modified Energy Factor 2.0, Water Factor 6.0)		1			2
	b. Meets CEE Tier 3 Requirements (Modified Energy Factor 2.2, Water Factor 4.5)					2
	3. ENERGY STAR Refrigerator Installed					
	a. ENERGY STAR Qualified & < 25 cu.ft.Capacity **(Mutually Exclusive with J3a)**		1			
	b. ENERGY STAR Qualified & < 20 cu.ft Capacity **(Mutually Exclusive with J3a)**		1			
	4. Built-In Recycling & Composting Center					
	a. Built-In Recycling Center				2	
	b. Built-In Composting Center				1	
	5. Electrical Verification (Required for Whole House)		R			
	6. Verification of Entire Electrical System		2			
	7. Energy Efficient Lighting		1			
	8 Low-Mercury Fluorescent Lighting Installed (lamps, bulbs)					
	a. Low- Mercury Products Are Installed Whenever Linear Flourescent Lamps Are Used or Replaced				1	
	b. Low- Mercury Products Are Installed Whenever Compact Fluorescent Lamps Are Used or Replaced				2	
	9. Lighting Controls Installed		1			
	Total Points Available in Appliances and Lighting = 19					
N. OTHER		**Possible Points**				
	1. Incorporate GreenPoint Checklist in Blueprints Or Distribute Checklist (Required for Whole House and Elements)		R			
	2. Develop Homeowner Manual of Green Features/Benefits		1			1
	3. Hazardous Waste Testing					
	a. Lead Testing Interior, Exterior and Soil			1		
	b. Asbestos Testing and Remediation			1		
	4. Gas Shut Off Valve (motion/ non-motion)			1	1	
	Total Points Available in Other = 6					
P. INNOVATIONS		**Possible Points**				
	AA. Community: No Innovation Measures At This Time					
	A. Site					
	1. Cool Site	1				
	B. Foundation: No Innovation Measures At This Time					
	C. Landscaping					
	1. Irrigation System Uses Recycled Wastewater					1
	2. FSC-Certified Wood, Recycled Plastic or Composite Lumber - Fencing				1	
	D. Structural Frame and Building Envelope					
	1. Design, Build and Maintain Structural Pest and Rot Controls					
	a. Locate All Wood (Siding, Trim, Structure) At Least 12 Inches Above Soil				1	
	b. All Wood Framing 3 Feet from the Foundation is Treated with Borates (or Use Factory-Impregnated Materials) OR Walls are Not Made of Wood			1		
	2. Use Moisture Resistant Materials and Practices in Wet Areas of Kitchen, Bathrooms, Utility Rooms, and Basements			1		
	3. Use FSC-Certified Engineered Lumber					
	a. Engineered Beams and Headers				1	
	b. Insulated Engineered Headers				1	
	c. Wood I-Joists or Web Trusses for Floors				1	
	d. Wood I-Joists for Roof Rafters				1	
	e. Engineered or Finger-Jointed Studs for Vertical Applications				1	
	f. Roof Trusses				1	
	E. Exterior Finish					
	1. Green Roofs (25% or Roof Area Minimum)					
	a. 25% (2 points) measured on the horizontal	1	1			
	b. 50% (4 points total)	1	1			

Project Name		Points Achieved	Community	Energy	IAQ/Health	Resources	Water
	F. Insulation: No Innovation Measures At This Time						
	G. Plumbing						
	1. Graywater Pre-Plumbing (Includes Clothes Washer at Minimum)						1
	2. Graywater System Operational (Includes Clothes Washer at Minimum)						2
	3. Innovative Wastewater Technology (Constructed Wetland, Sand Filter, Aerobic System)						1
	4. Composting or Waterless Toilet						1
	5. Install Drain Water Heat-Recovery System			1			
	H. Heating, Ventilation and Air Conditioning (HVAC)						
	1. Humidity Control Systems (Only in California Humid/Marine Climate Zones 1,3,5,6,7)				1		
	I. Renewable Energy: No Innovation Measures At This Time						
	J. Building Performance						
	1. Test Total Supply Air Flow Rates			1			
	2. Energy Budget Analysis (J3) Completed By CEPE			1			
	K. Finishes: No Innovation Measures At This Time.						
	L. Flooring: No Innovation Measures At This Time.						
	M. Appliances: No Innovation Measures At This Time.						
	N. Other						
	1. Homebuilder's Management Staff Are Certified Green Building Professionals		1				
	2. Comprehensive Owner's Manual and Homeowner Education Walkthroughs		1				
	3. Additional Innovations: List innovative measures that meet green building objectives. Points will be assessed by Build It Green and the GreenPoint Rater.						
	a. Describe Innovation Here and Enter Possible Points in Columns L-P						
	b. Describe Innovation Here and Enter Possible Points in Columns L-P						
	c. Describe Innovation Here and Enter Possible Points in Columns L-P						
	d. Describe Innovation Here and Enter Possible Points in Columns L-P						
	e. Describe Innovation Here and Enter Possible Points in Columns L-P						
	f. Describe Innovation Here and Enter Possible Points in Columns L-P						
	g. Describe Innovation Here and Enter Possible Points in Columns L-P						
	h. Describe Innovation Here and Enter Possible Points in Columns L-P						
	Total Points Available in Innovation = 26+						

Summary

Total Available Points	224+	26	90	47	77	44
Minimum Points Required (Whole House)	50		20	5	6	8
Minimum Points Required (Elements)	25		8	2	2	4
Total Points Achieved						

Project has not yet met the recommended minimum requirements for GreenPoint Rated Whole House:

- *Total Project Score of At Least 50 Points*
- *Required measures:*
  - *-A2a: Divert All Cardboard, Concrete and Metals*
  - *-B2: Moisture Source Verification and Correction*
  - *-D9: Sound Exterior Assemblies*
  - *-G3a: All Fixtures Meet Federal Energy Policy Act*
  - *-G4: Plumbing System Integrity and No Plumbing Leaks*
  - *-H1a: Visual Survey of Installation of HVAC Equipment*
  - *-H12a: Carbon Monoxide Testing and Correction*
  - *-H13: Combustion Safety Backdraft Test*
  - *-J3a: Meet Energy Budget for Home Based on Year (includes blower door test)*
  - *-M5: Electrical Verification*
  - *-N1: Incorporate GreenPoint Checklist in Blueprints or Distribute Checklist*
- *Minimum points in specific categories:*
  - *-Energy (20 points)*
  - *-IAQ/Health (5 points)*
  - *-Resources (6 points)*
  - *-Water (8 points)*

GreenPoint Rated Existing Home Energy Vintage Thresholds

A home qualifying for the Whole House label must meet or beat the Energy Budget based on a Vintage Threshold for its age.

	Pre-1980	1980 - 2000	2001 - 2005	2005 +
Conditioned Floor Area	Actual	Actual	10% Better than House with 2001 Prescriptive Package Measures	10% Better than House with 2005 Prescriptive Package Measures
Single or Two Story	Actual	Actual		
Floor (Raised Floor or Slab)	Actual	Actual		
Average Ceiling Height	Actual	Actual		
Insulation				
Roof/Attic	R-30 / R-38[1]	R-30 / R-38[1]		
Walls	Actual	R-13		
Raised Floors	R-19	R-19		
Slab	Actual	Actual		
Glazing				
Percentage (floor area)	Actual	Actual		
U-Factor	0.99	0.79		
SHGC	0.74	0.70		
HVAC				
Heating				
Gas (AFUE)	0.90	0.90		
Electric (HSPF)	8.8	8.8		
Cooling (if any)				
SEER	14.0	14.0		
EER	11.5	11.5		
Ducts (if ducted system)				
Insulation	R-6 or 8[2]	R-6 or 8[2]		
Leakage (% airflow)	15%	15%		
Water Heating	Actual	Actual		
Infiltration (ACH)	0.5	0.5		
Other Conservation Features				
Thermostat	Programmable	Programmable		

1. Attic Insulation: R-30 Climate Zones 2 - 10, R-38 Climate Zones 1, 11-16

2. Duct Insulation: R-6 Climate Zones 2 - 10, R-8 Climate Zones 1, 11-16