Getting Traction in Market Transactions

Better Buildings Summit

May 8, 2014

Potential Value of EE in Building Lifecycle: Commercial, Residential & Public

Rent/Sale transactions

- **Higher prices for efficient buildings**
- Driven by:
  - Labels/brand premium
  - Expected NOI benefits
  - Expected comfort benefits

Net Operating Income (NOI)

- **Better NOI**
- Driven by:
  - *Higher Income:*
    - *Tenant rents*
    - *Employee productivity*
    - *Retail sales*
  - Lower Expenses:
    - Utility, maintenance and repair costs
    - *Tenant vacancy/ turnover*
  - Better cash flow stability

Valuation & Financial Products

- **Higher value buildings**
- **Better debt terms**
- **Greater capital availability**
- **Lower insurance rates**
- Driven by:
  - Comparable rent & sale transactions
  - *Discounted cash flow analysis*
  - (or construction costs for new buildings)

Italics: Elements that are only relevant for commercial and income-producing properties (e.g. multi-tenant buildings, retail, HQs)

Evidence of the value that is being achieved today – DOE Review of >50 Studies:

Studies sampling thousands of buildings nationwide found that buildings with LEED and ENERGY STAR certifications have:

- **Higher Rental Rates** – LEED buildings display a 15.2-17.3% premium and ENERGY STAR buildings display an 7.3-8.6% premium over similar* non-rated buildings[50]
- **Higher Occupancy Rates** – LEED buildings have 16-18% higher occupancy than non-rated buildings, while ENERGY STAR buildings have 10-11% higher occupancy.[50]
- **Lower Utility Costs** – Electricity and gas expenses in ENERGY STAR buildings are more than 13% lower compared to similar* non-rated buildings[42]
- **Increased Sales Prices** –LEED buildings exhibit a 10-31% premium and ENERGY STAR buildings exhibit an 6-10% premium over non-rated buildings[20,35]
- **Low Construction Cost Premiums** – Construction costs for LEED buildings are typically equal to or only slightly greater than the costs for non-rated buildings, primarily due to the costs of certification (approximately 2%)[23]

Better Buildings U.S. DEPARTMENT OF ENERGY

Sources: 20, 23, 35, 42, 50. See Appendix.
*Controlled for factors such as building class, location, etc.

U.S. DEPARTMENT OF ENERGY

Evidence of the value that is being achieved today – Areas for Further Research

- How does it differ by building sector or market?
  - Break-downs by geographic markets
  - Sub-sectors such as retail malls, multifamily, warehouse, healthcare

- What about different levels of efficiency?
  - Specific LEED level or ENERGY STAR Score, as well as energy use intensity (EUI) or specific equipment investments, independent of labels

- What about other potential value streams?
  - Tenant-related aspects: occupancy, leasing velocity, tenant quality and turnover, tenant improvement (TI) allocations
  - **Occupant health, comfort, and productivity**
  - Operating expenses, emergency maintenance and repair costs
  - Overall cash flow stability and market price risk
  - Cap rates on building sales and REIT stock prices
  - Building insurance rate premiums

How to more fully incorporate efficiency into market transactions, financial products and valuation?

Leasing and Sales

- *David Pogue* - Global Director of Corporate Responsibility, CBRE

Mortgage Lending

- *Donna Varner* - Credit Risk Analyst III, Fannie Mae Multifamily Green Initiative

Appraisals

- *Theddi Wright Chappell* - Sustainable Values, Inc.

Upcoming Webinars

- **Energy Efficiency and Building Financial Performance research review and discussion**

  Wednesday, May 21, 2014, 1:00 PM - 2:30 PM EST

- **Review The Appraisal Foundation's Core Competencies for Appraisers to Value Green Buildings**

  Wednesday, May 14, 2014, 1:00 PM - 2:30 PM EST

Sign up at: http://www4.eere.energy.gov/alliance/events

"We know the price of everything and the value of nothing…."

-Oscar Wilde, Picture of Dorian Gray (1890)

Accounting for High(est) Performance

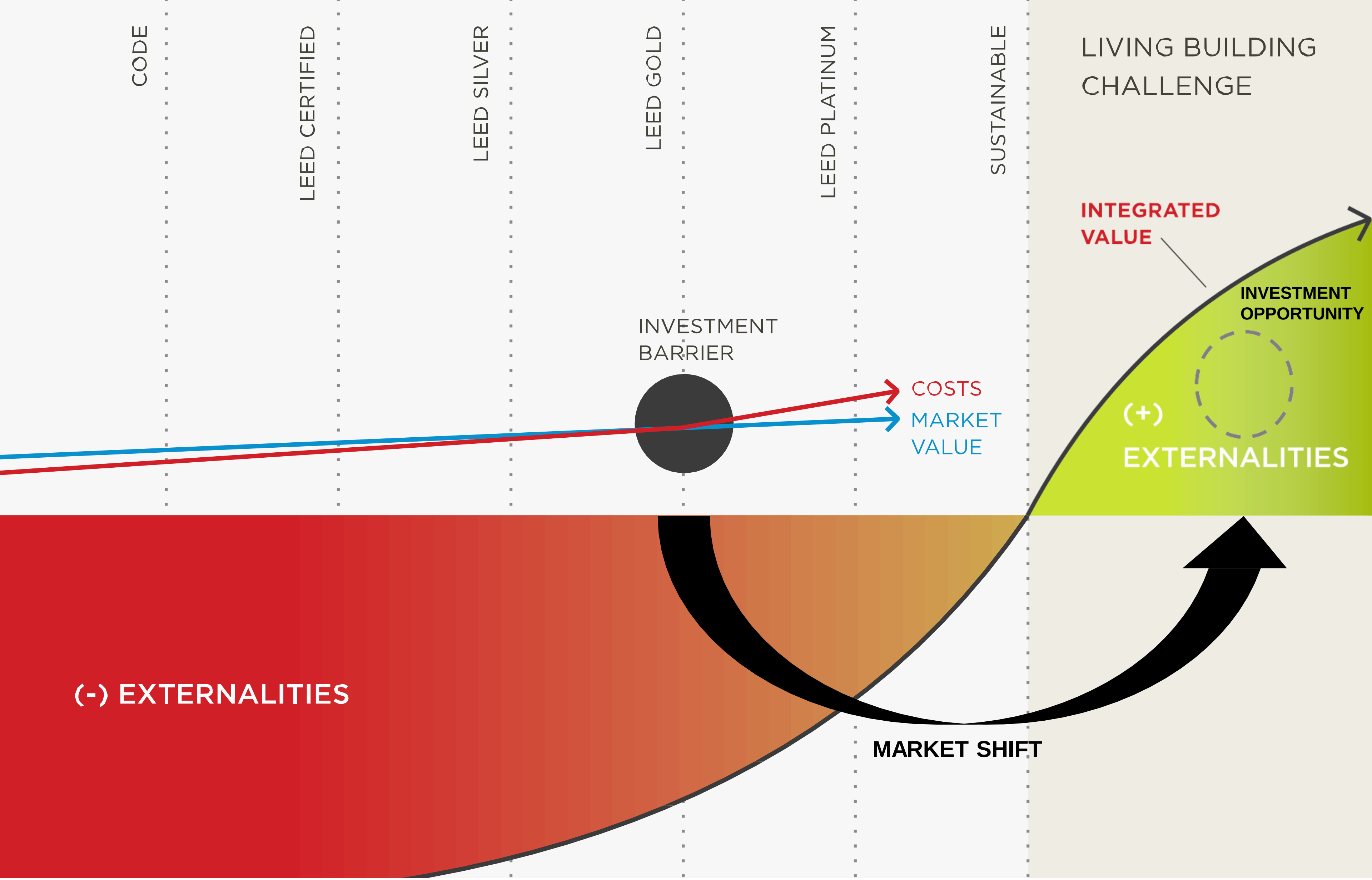
- Global interpretation of "value" is changing
- Differences in perceptions of value have created challenges in how we should "value" a more high performing, energy efficient built environment
- Challenge is to quantify the full range of costs and benefits of the assets being analyzed

Can You Answer These Questions?

- Which green features will best "future proof" your project and optimize its marketability in your market?
  - In other markets in which you have – or would like to have – a presence?
- What information is most critical in estimating the value of your property appropriately?
- What can you do to ensure that you receive the most accurate estimate of value for your project?

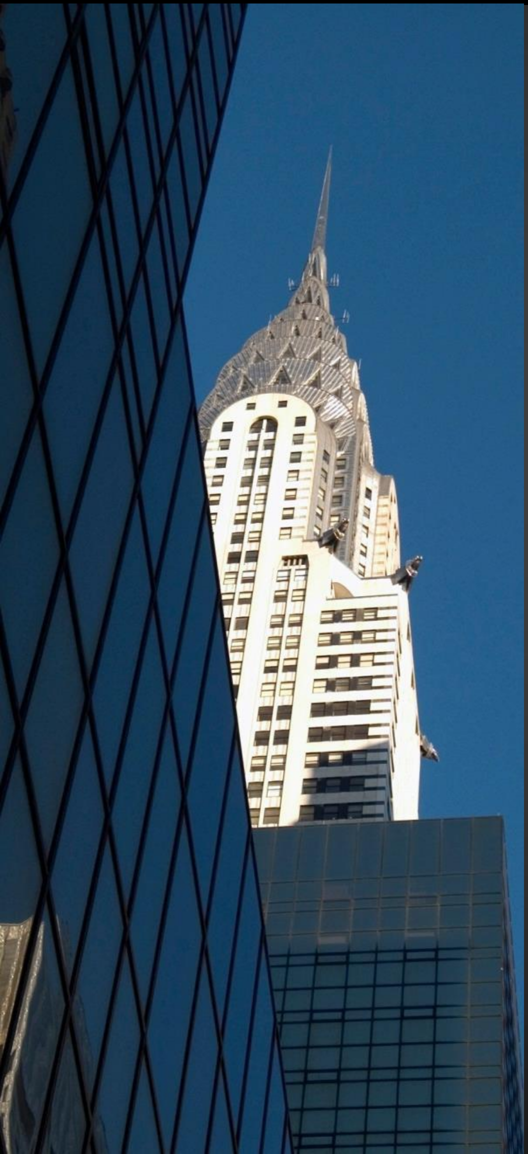
THE ECONOMICS OF CHANGE

How do we map, measure, and model economic, environmental + social value creation in the built environment?



THE ECONOMICS OF CHANGE

What is Happening? What Needs To?



- Traditional property valuation does not currently incorporate social or environmental considerations – nor the broader impacts of energy efficiency
  - Lower ghg's
  - Smaller carbon footprint
- Has been progress in identifying what valuers should include in reports (Appraisal Foundation Guidelines)
- Problem remains: entire process occurs AFTER all strategic decisions are made

Switch the Focus & Expand the Application

- Should in fact be using the appraisal process to **identify/create** value
- Need to REVERSE the process and do analyses up front to ensure maximum value
- "Value vetting" should occur at charrette stage – and be incorporated into integration process along with other design considerations
- Need to remember: *If you can't monetize the attribute, it doesn't get counted*

Thank You!

For additional questions and/or information:

Theddi Wright Chappell, CRE, MAI, FRICS, AAPI, LEED AP
CEO, Sustainable Values, Inc.
Park City, UT
theddi@sustainablevalues.com

FannieMae

MULTIFAMILY GREEN INITIATIVE

Fannie Mae Multifamily Overview

Fannie Mae Multifamily

March 4, 2014

Fannie Mae Mission and Portfolio

- Fannie Mae provides liquidity, stability and affordability to the secondary mortgage market
- Fannie Mae's Multifamily Portfolio contains loans having an aggregate unpaid principal balance of $199B as of YE 2013
- Our portfolio includes 36,000 multifamily properties, representing 3.6M rental units
  - Includes Market Rate, Affordable Subsidized and Affordable by Area Median Income (AMI) properties
- We hold 20% of U.S. Multifamily Mortgage Debt outstanding[1]

Fannie Mae Multifamily has provided liquidity, stability and affordability to the multifamily market for over 25 years.

[1] Based on the Federal Reserve's December 2013 mortgage debt outstanding release, the latest date for which the Federal Reserve has estimated mortgage debt outstanding for multifamily residences.

Why Does Fannie Mae Care About Green Multifamily Properties?

… because green multifamily housing can benefit all Fannie Mae stakeholders.

Tenants

- Decreases living expenses
- Improves quality of life and living conditions
- Reduces health issues
- Improves affordability

Property Owners

- Increases Net Operating Income and value by reducing in energy and water expenses
- Provides market differentiation, enhances occupancy and retention
- Extends building life

Lenders

- Manages expense risk
- Enhances cash flow and property value
- Provides impetus and support for allocation of capital for upgrades and improvements

Fannie Mae

- Improves property condition and operating performance
- Advances our corporate mission by preserving affordable housing
- Advances Federal policy on energy & water conservation

MBS Investors

- Indicates borrower's focus on green improvements to property
- Meets investor requirements for green investments

Fannie Mae's Available Green Financing: GRP & M-PIRE

Terms	Green Preservation (GPP)	NYC Multifamily Property Improvements to Reduce Energy (M-PIRE)
Additional Capital	▪ Provides up to 4-5% in additional loan proceeds	
Others Benefits	▪ DSCR may be lowered to 1.15x	▪ Maintains 1.25x DSCR by underwriting up to 50% of projected energy and water savings attributed to owner and tenant
Underwriting	▪ Requires PNA and High Performance Building Module (ASHRAE Level II Energy Audit)	
Asset Management	▪ Complete retrofits within 12 months of loan close ▪ Report annual energy and water cost/consumption in ENERGY STAR	
Securitization	▪ All loans securitized. MBS is disclosed to investor as "Green MBS".	
Restrictions	▪ Multifamily Affordable Housing only	▪ Limited to NYC's 5 boroughs ▪ Conventional, Affordable and Coops allowed; no military or student housing

Challenges Or Barriers In Providing Financing

- Education
  - Property Owners - Value of improvements
  - Lenders - Selling the products
- Demand
  - Property Owners – Financing improvements versus self funding
  - Investors - MBS backed by energy efficient properties
- Competition
  - Standards – Differing requirements or no requirements
  - Timing – Initiatives and products just getting off the ground
  - Interest Rates - Very low

INDUSTRY PROGRESSION

THEN (2000)

EPA ENERGY STAR®

- First label for commercial building
- Fewer than 500 buildings
- No cities or states with energy disclosure regulations
- No commercial real estate firm chosen "Partner of the Year"

USGBC LEED®

- First LEED certification launched for new construction
- No buildings officially certified
- No LEED APs

TRANSPARENCY | REPORTING

- GRI (14 firms respond globally)
- CDP taking shape
- GRESB does not exist

NOW (2014)

EPA ENERGY STAR®

- → More than 250,000 buildings benchmarked
- → More than 24,000 labels (500 in LA, Chicago and Washington DC)
- → 11 cities/states adopting disclosure laws and 14 more pending
- → 14 real estate firms are "Partner of the Year"

USGBC LEED®

- → Globally recognized brand
- → 4 billion square feet certified in every major global market
- → 189,000 LEED APs

TRANSPARENCY | REPORTING

- → All but one S&P 500 firm reported to either GRI (3,500 firms) or CDP (775 firms)
- → GRESB has 540 investment funds reporting, valued at more than $2 trillion

GREEN BUILDING ADOPTION

	THEN (2005)	NOW (2013)
TOTAL GREEN		
Number of Buildings	1.45%	→ 13.16%
% of Space	5.55%	→ 39.27%
EPA ENERGY STAR		
Number of Buildings	1.30%	→ 10.18%
% of Space	5.10%	→ 30.29%
USGBC LEED		
Number of Buildings	0.14%	→ 4.97%
% of Space	0.40%	→ 19.19%
Number of LEED EB Buildings	0.03%	→ 3.08%
% of Space	0.11%	→ 15.22%

TOP GREEN CITIES