



**Better
Buildings®**
U.S. DEPARTMENT OF ENERGY

Underwriting Energy: Are Commercial Mortgages Ignoring Energy Related Risks and Benefits?

Better Buildings Summit

May 10, 2016

Agenda

- 09:45** Welcome & Introductions
- 09:50** Speaker Presentations
- 10:30** Discussion
- 11:00** Adjourn

Today's Presenters

Jason Hartke



**Program Manager,
U.S. Department of Energy**

Nancy Wallace



**Professor of Finance & Real Estate,
UC Berkeley**

Kelly Krhounek



**Multifamily Credit Risk Manager,
Fannie Mae**

Bruce Schlein



**Director of Alternative Energy Finance,
Citi Bank**

**Nancy Wallace,
UC Berkeley**

Underwriting Energy Efficiency in Commercial Mortgages: Challenges and Possible Interventions

Nancy Wallace

University of California, Berkeley

Fisher Center for Real Estate and Urban Economics

Real Estate and Financial Markets Laboratory

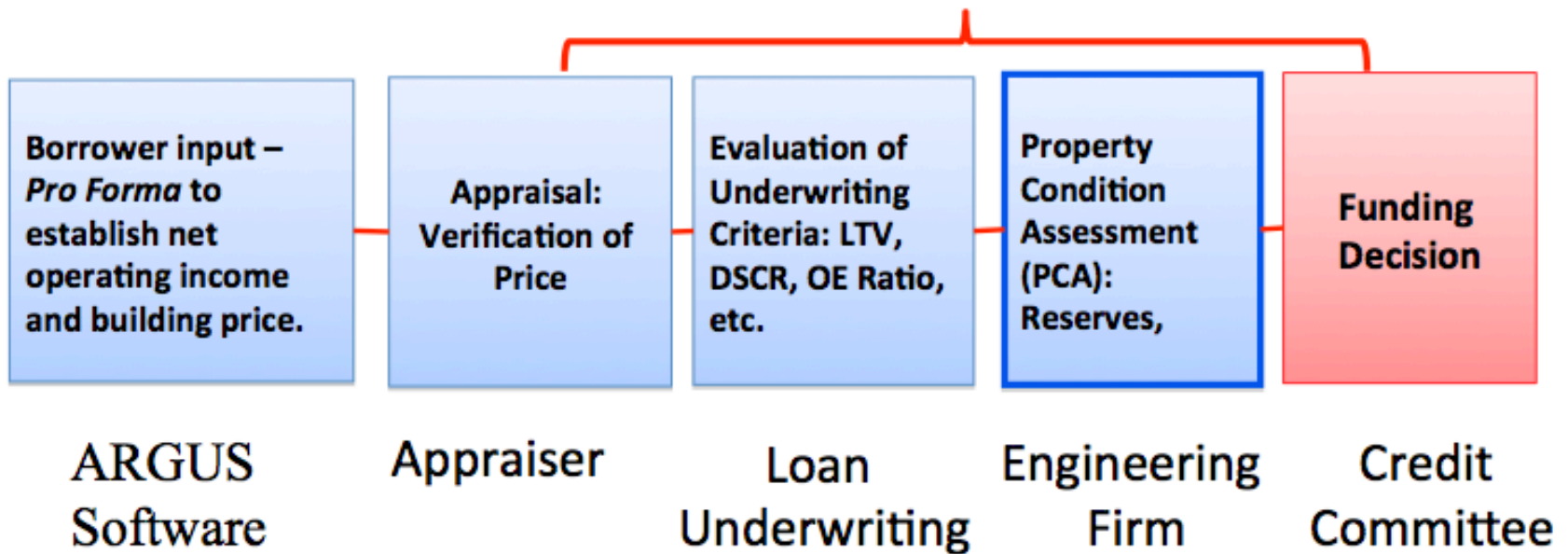
DOE Better Buildings Summit

May 10, 2016

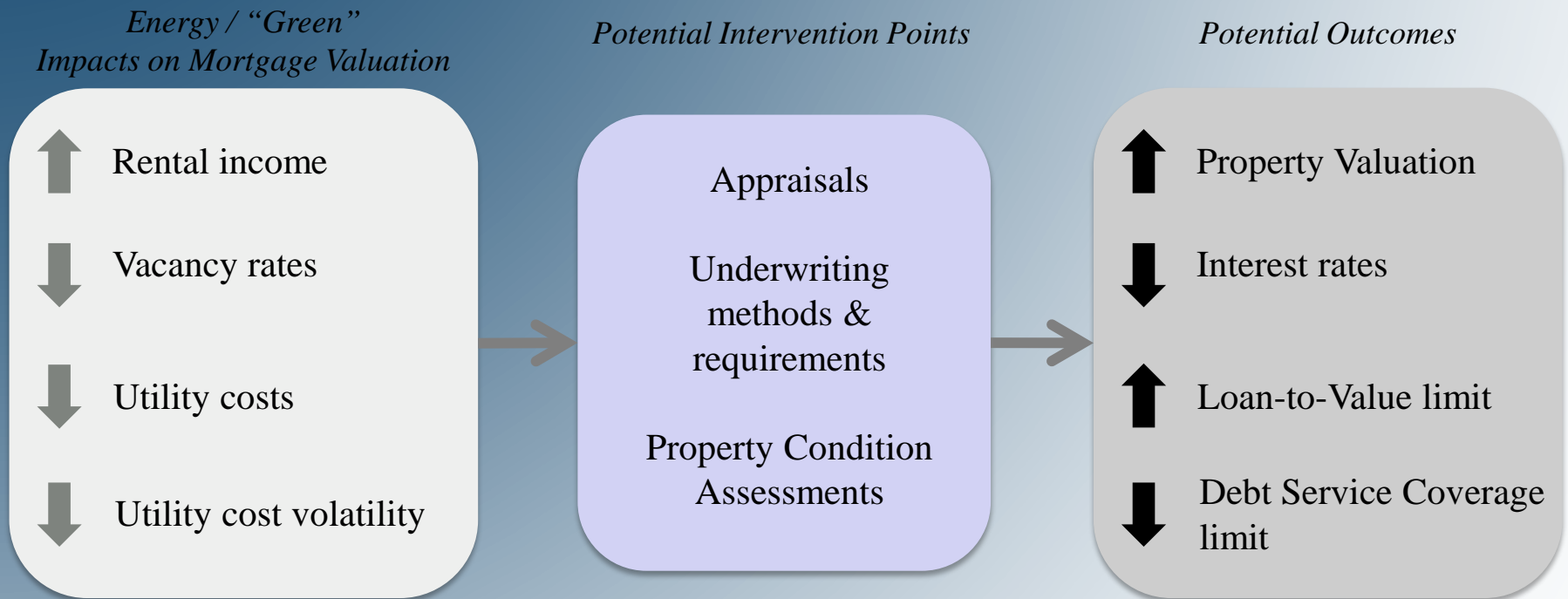
WALTER A. HAAS
SCHOOL OF BUSINESS

Challenges in Current Underwriting Processes

Current Underwriting Sequence



Potential Interventions



Potential Interventions from Survey (> 30 organizations)

- 1. Demonstrate to lenders how and where energy factors “move the needle.”**
- 2. Provide a simple, seamless energy efficiency metric (score) for underwriting applications.**
- 3. Include an energy efficiency evaluation in the PCA and move PCA earlier in process.**
- 4. Owners need to demand consideration of energy efficiency by appraisers/lenders and provide the data.**
- 5. Include energy metrics into the pro forma reports (ARGUS).**
- 6. Have appraiser properly value energy factors.**

Ranked Interventions

1. Energy Efficiency “moves the needle”

Task 1: Define demonstration requirements with lenders.

Task 2: Develop analysis approach – statistical/case study

Task 3: Conduct analysis.

Task 4: Present results to lenders and identify next steps.

2. Energy Efficiency requirements for PCAs

Task 1: Confirm viability and approach -- Engage with PCA firms.

Task 2: EE module scope.

Task 3: Confirm pilots.

Task 4: Develop EE module.

Task 5: Pilot.

3. Energy metrics in RE pro forma (ARGUS)

Task 1: Confirm viability and approach – engage ARGUS.

Task 2: Develop specification and user guidelines for energy metrics – engage ARGUS.

Task 3: Develop implementation plan and schedule – engage ARGUS.

Conclusions

- Energy efficiency metrics are missing from all stages of commercial real estate underwriting.
- Energy efficiency metrics should be simple and numeric.
- Energy efficiency metrics could be introduced at each stage of the underwriting process, but **highest impact interventions**:
 1. Establish that EE metrics “move the needle” for key underwriting measures (loan-to-value ratio, debt service coverage ratio, building value.)
 2. Develop EE module in Property Condition Assessments (PCAs).
 3. Introduce explicit EE metrics into pro forma reports – ARGUS Software.

**Kelly Krhounek,
Fannie Mae**



Fannie Mae Multifamily Green Initiative: Green Financing for Investments in Multifamily Sustainability

May 10, 2016

Fannie Mae Mission and Portfolio

- Fannie Mae provides liquidity, stability, and affordability to the secondary mortgage market
- Fannie Mae's Multifamily provides financing for:
 - Market Rate, Affordable, Seniors, Student, Military, Manufactured, and Cooperative properties
 - Approximately 19% of all U.S. Multifamily Mortgage Debt outstanding as of Q3 2015
- Fannie Mae accesses capital by securitizing the loans



Our Multifamily Green Financing Framework

Fannie Mae Multifamily Green Financing must result in a **positive, measureable impact** to **each pillar** of the **Triple Bottom Line**.

- Lower credit risk
- Higher cash flows
- Higher property value

Financial



- Greater affordability for tenants
- Higher quality, more durable housing
- Healthier housing

Social



- Lower use of energy, water, and natural resources
- Greater resiliency to natural disasters

Environmental



Green Building Certification Pricing Break

- Available for any Fannie Mae Loan on a property with a current, eligible Green Building Certification
 - Conventional or Affordable, First lien or Supplemental
 - No restriction on interest rate type, loan term, or loan size
- Preferential pricing reduces the interest rate of most loans
- Eligible Green Building Certifications:
 - EarthCraft Multifamily
 - ENERGY STAR®
 - Enterprise Green Communities
 - National Green Building Standard
 - Green Globes
 - GreenPoint Rated
 - LEED

Green Building Certification Pricing Break

- Available for any Fannie Mae Loan on a property with a current, eligible Green Building Certification
 - Conventional or Affordable, First lien or Supplemental
 - No restriction on interest rate type, loan term, or loan size
- Preferential pricing reduces the interest rate of most loans
- Eligible Green Building Certifications:
 - EarthCraft Multifamily
 - ENERGY STAR®
 - Enterprise Green Communities
 - National Green Building Standard
 - Green Globes
 - GreenPoint Rated
 - LEED

Lower all-in interest rate for Green Building Certified Property: The Station House

- The Station House in Maplewood NJ: First loan to close using the Green Building Certification Pricing Break
- LEED certified 50-unit multifamily rental property
- \$10.2M loan
- Green Building Certification Pricing Break reduced the interest rate by 10 basis points (0.10 percent)
- *Borrower will save more than \$101,000 in interest payments over the life of the loan*



Green Rewards

- Available nationwide, feature can be used with almost any loan:
 - Conventional or Affordable
 - First lien, Supplemental, or 2nd Supplemental
 - Multifamily, Cooperative, Seniors, Military, and Student
 - No restriction on interest rate type, loan term, or loan size
- Preferential pricing reduces the interest rate of most loans
- Provides additional loan proceeds by: allowing underwriting of **up to 50%** of the projected operating savings resulting from the planned energy and water efficiency retrofits
- Eligibility: properties must be able to project a **minimum of 20%** annual savings in energy or water use

Green Rewards Requirements

- Physical Condition Assessment with the High Performance Building Module
 - ASHRAE Level II energy audit and identification of cost effective opportunities for increasing energy and water efficiency
- All additional retrofit proceeds will be escrowed until completion
- Retrofits must be completed within 12 months of loan closing
- Borrowers must report annual energy and water metrics using ENERGY STAR® Portfolio Manager

**Bruce Schlein,
Citi Bank**

Energy Efficiency Financing Solutions

PROPERTY TYPE / SECTOR

PRODUCT / SOLUTION	MUSH	Federal/DOD	Single Family	Multifamily	Commercial	Corporate
Large Single Project	Yes Detroit SL	Yes	N/A	Yes	Yes	Yes
Pooled Asset Deal	Yes Green Campus	Yes	Yes WHEEL; Kilowatt	Difficult HPET	Difficult	Yes
ESCO/ESA Two Factor	Yes	Yes	N/A	Difficult	Difficult	Yes Citi London
PACE	Yes	N/A	Yes Subordinated?	Yes	Yes	Yes
On-Bill (OBR)	Yes Hawaii GEMS	N/A	Yes NYSERDA	Yes	Yes	Yes
Stranded Cost Tariff	Yes	N/A	Yes	Yes	Yes	Yes
Green Bond	Yes Massachusetts	N/A	N/A	N/A	N/A	Yes Unilever
Sustainable Energy Utility	Yes Delaware	N/A	N/A	N/A	N/A	N/A
Microfinance	N/A	N/A	Yes Mongolia	N/A	Yes	N/A

Takeaways from Citi Underwriting Team

- Fannie Mae and other housing agencies' experiences with green financing is valuable for future direction
- Standards for underwriting energy savings and technologies are needed for the lending community
- Mitigating risks and demonstrating certainty to performance and cost savings is key

Discussion

Thank you!

Jason Hartke
U.S. Department of Energy
Jason.Hartke@EE.Doe.gov

Kelly Krhounek
Fannie Mae
Kelly_Krhounek@FannieMae.com

Nancy Wallace
UC Berkeley
NEWallace@Berkeley.edu

Bruce Schlein
Citi Bank
Bruce.S.Schlein@Citi.com