Energy Efficiency Labeling for Real Estate

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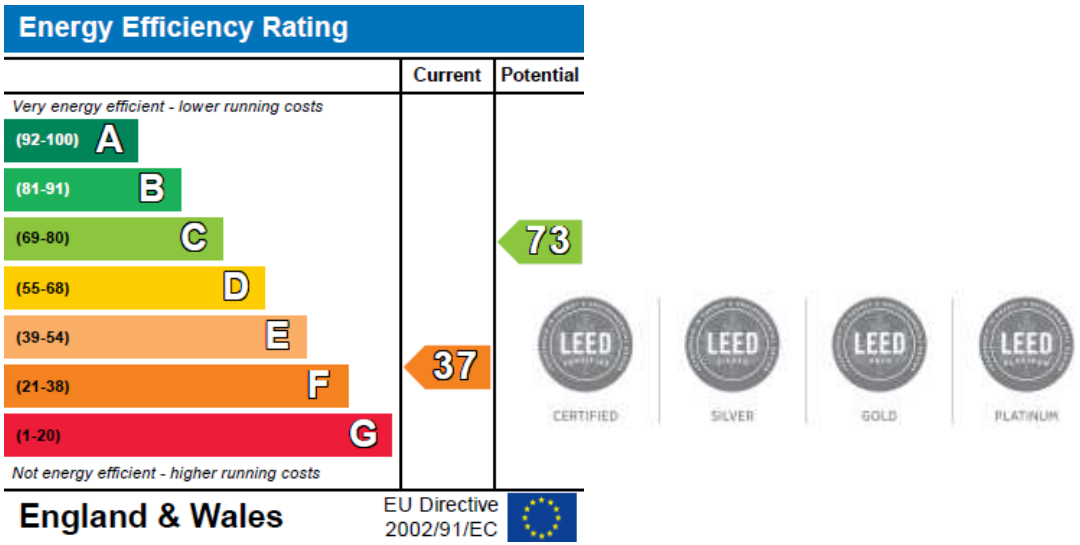
Stuart Sessions
Environomics, Inc.
Bethesda, MD

Aim of Energy Labels

Make the property's energy efficiency apparent to the market. Examples:



The label usually also includes a list of possible efficiency upgrades to the property, with estimated cost and payoffs

Proponents' Rationale for Energy Labels

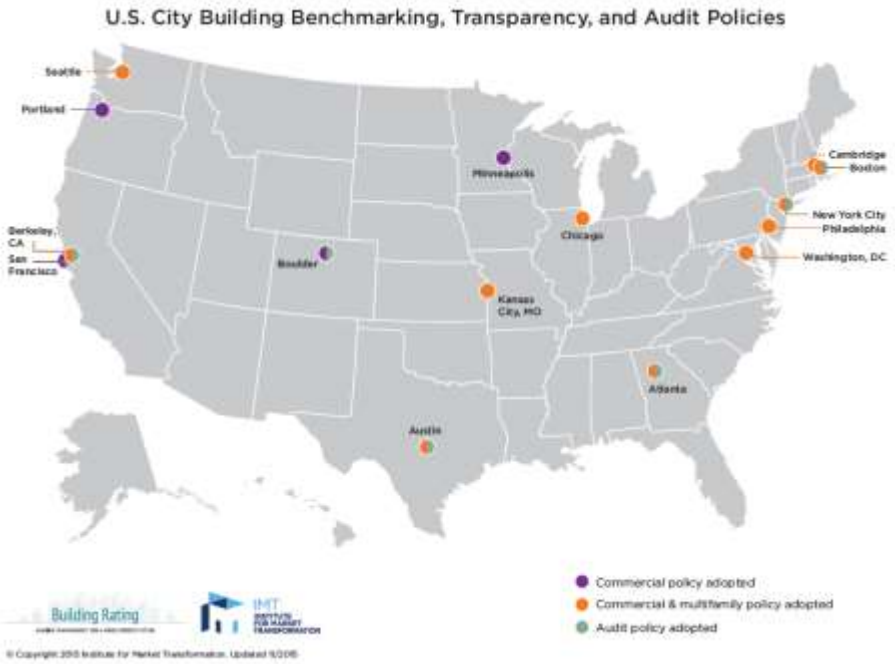
- Label information suggesting a property is energy efficient signals lower operating costs and perhaps other amenities
  - Prospective purchasers will pay more
  - Owner will make upgrades to capture this value
- If the label includes information indicating what can be done to improve the property's energy efficiency (e.g., energy audit information)
  - Both the owner and a new purchaser have a roadmap to potential upgrades
- Many jurisdictions are adopting energy labels as an element of their climate programs

Energy Labels for Residential Properties -- What's Happening

- Millions of new homes rated and labeled using Home Energy Rating System (HERS) or others
- US Dept of Energy (DOE) Home Energy Score
- Austin, TX & Berkeley, CA require audit prior to sale for some homes, must provide to potential buyers
- Chicago, Montgomery County MD require utility cost disclosure
- Varied State legislation – CT, MA, VT, OR, CA – some enacted, some not
- Some use of green certifications for residential, mostly new homes: LEED, Energy Star, Earth Advantage, Built Green, etc.
- Mandatory labeling throughout Europe and parts of Australia; has been considered in Canada

Energy Labels for Commercial Properties -- What's Happening

- Benchmarking, disclosure, audit requirements spreading rapidly
- Much use of LEED, Energy Star, etc.



National Association of Realtors® Sponsored Research – Worldwide Literature Review on 4 Energy Labeling Policy Issues

1. Does the market respond to energy label information?
2. Does labeling result in energy-saving investments and reduced usage?
3. Can an energy label decrease the value of some properties?
4. How does the market response to a label compare with the value of the underlying energy costs?

Does the market respond to energy label information?

- Yes, clearly. Pooled analysis of 30 studies worldwide finds average 7.6% premium

- Residential studies
  - U.S.: Energy Star, LEED, etc. get 0 – 9% premium over comparable unlabeled homes
  - Elsewhere: 1- 4% increase for one step in rating; often >10% for multiple steps or all steps from lowest rating to highest

- Commercial studies
  - U.S.: usually 2 – 6% increase in rent, effective rent

Does labeling result in energy-saving investments and reduced energy usage?

- Residential: no evidence for yes
  - One study (Denmark) finds no impact 4 years later
  - Slow progress, widespread noncompliance with mandatory European programs
- Commercial: maybe, slightly
  - One study finds 3% reduction, but due to reduced "inattention", not increased investments
  - Another analysis finds no impact
- The "energy paradox": difficulty of motivating homeowners to make efficiency investments that would seem to offer good payoff

Can an energy label decrease the value of some properties?

Energy Label Program	Impact of Lowest Label Rating vs. Middle Rating	Impact in U.S. Dollars
Netherlands: homes	4.8% reduction in value	$14,000 - $17,300 loss
Australia: homes	6.4% reduction in value	about $30,000 loss
Great Britain: homes	7.6% reduction in value	$20,000 - $28,000 loss
Netherlands: office buildings	6.5% reduction in rent	$1.40/sq. ft. lower

- Yes
- Unidirectional vs. bi-directional labels. Voluntary labeling vs. mandatory
- Why studies from Europe, not U.S.?

How does the market response to a label compare with the value of the underlying energy costs?

Five Analyses	Value of the Label in the Market	Capitalized Value of Difference in Energy Costs
±1 star in rating for median home in Australia	±12,822 to 19,808 AUD	±4,193 AUD
Netherlands homes: A-labeled vs. G-labeled F-labeled vs. G-labeled	 + €34,378 + €5,768	 + €14,190 + €3,548
Green-labeled homes in California	+ $34,800	≤ $14,400
3 certifications for homes in Austin, Portland, and Research Triangle	Energy Star in Austin for older homes: + $2,387/yr	$323 to $697/yr
Energy Star office building in U.S.	+ $37.50/sq ft	+$5.90 to $9.10/sq ft

Concluding Thoughts

- Mandatory labeling for all properties must yield poor rating for some properties
  - Can devalue neighborhoods with older, less well-maintained, energy-inefficient properties
  - Prefer voluntary labeling
- Labels should be accurate and not misleading
  - Should design label so as not to over-promise
  - Asset rating vs. use rating. Trade off utility vs. accuracy
- Labeling and the real estate transactions process
  - Don’t introduce a wild card late in a transaction
  - Cost to get some labels can be $300 or more (particularly if serious energy audit is required)