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Building Energy Disclosure and Upgrade Policies: The Big Picture

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BECC Conference
December 2, 2011



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BASICS OF DISCLOSURE AND UPGRADE POLICIES

Definitions

Disclosure Policies...

- Communicate the energy efficiency of a building to buyers or renters through a standardized energy label and rating

Upgrade Policies...

- Require that buildings be improved to a certain level of energy performance at particular “trigger points”

Barriers



Relationship to Behavior

- **Disclosure policies** are an enabling tool – information that individuals may then use to make choices that result in efficiency
 - Disclosure must be easy to understand, persuasive, and provided at the right time... i.e., designed based on social science
- **Upgrade policies**—while requiring actions that reduce energy use—can still be undermined or made successful through individual behaviors
 - McDonald's now charging 10¢ for toys in its happy meals in California
 - An upgrade policy can require use of an economizer within an HVAC system, but if it is not installed correctly or maintained, energy savings will diminish



Examples of Disclosure Policies

- City of Austin requires that owners of single family homes have an audit performed before the sale of the home

Result: Austin's goal is to have 25% of homes that are audited participate in the city's efficiency programs. 10% of homes have done so to date.

- Since 1999, the Australian Capital Territory has required the energy performance of single-family homes to be disclosed when the property is listed for sale, using half-star increments to communicate the rating

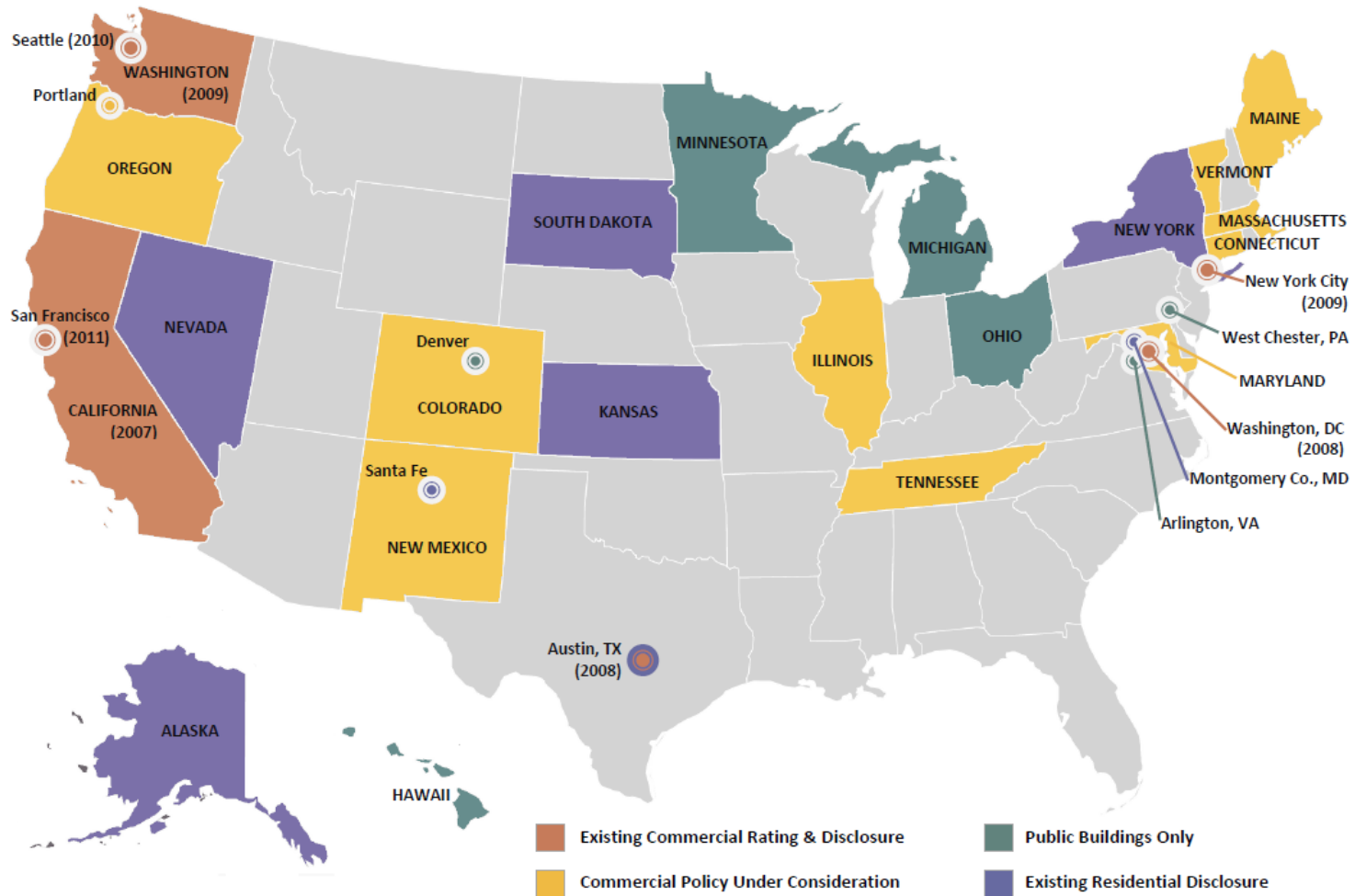
Result: Data were gathered on all homes sold in the Australian territory in 2005 and 2006. Higher efficiency was positively associated with higher home sales price, with each half-star rating equivalent to 1.23 percent of the sales price in 2005, and 1.91 percent in 2006.

Prevalence of Disclosure Policies

U.S. Building Rating and Disclosure Policies



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To access this document online, see www.imt.org/rating or www.buildingrating.org



Examples of Upgrade Policies

- City of Berkeley, California has required residential properties to comply with ten efficiency measures targeting heating, hot water, and lighting when they are sold, transferred, or undergoing substantial renovations since 1987
- Under the EU's Energy Performance in Buildings Directive, Portugal requires public buildings that achieve a poor rating to make all upgrades with a payback time of fewer than eight years within three years of receiving their rating

Result: Utility data show that Berkeley's requirements have resulted in a 7.9% decrease in residential electricity consumption since 1990 levels, during which time their total population increased by 33%.



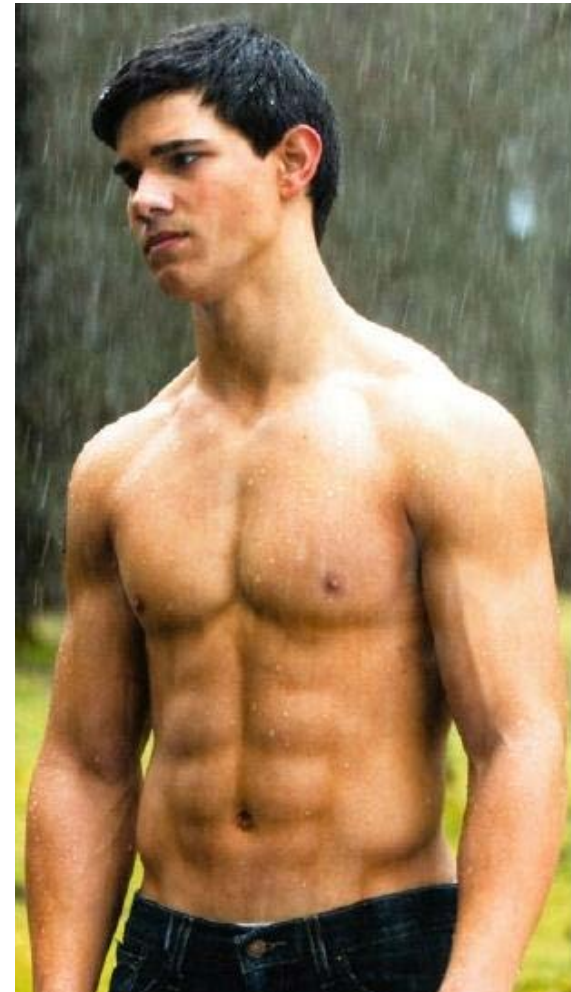
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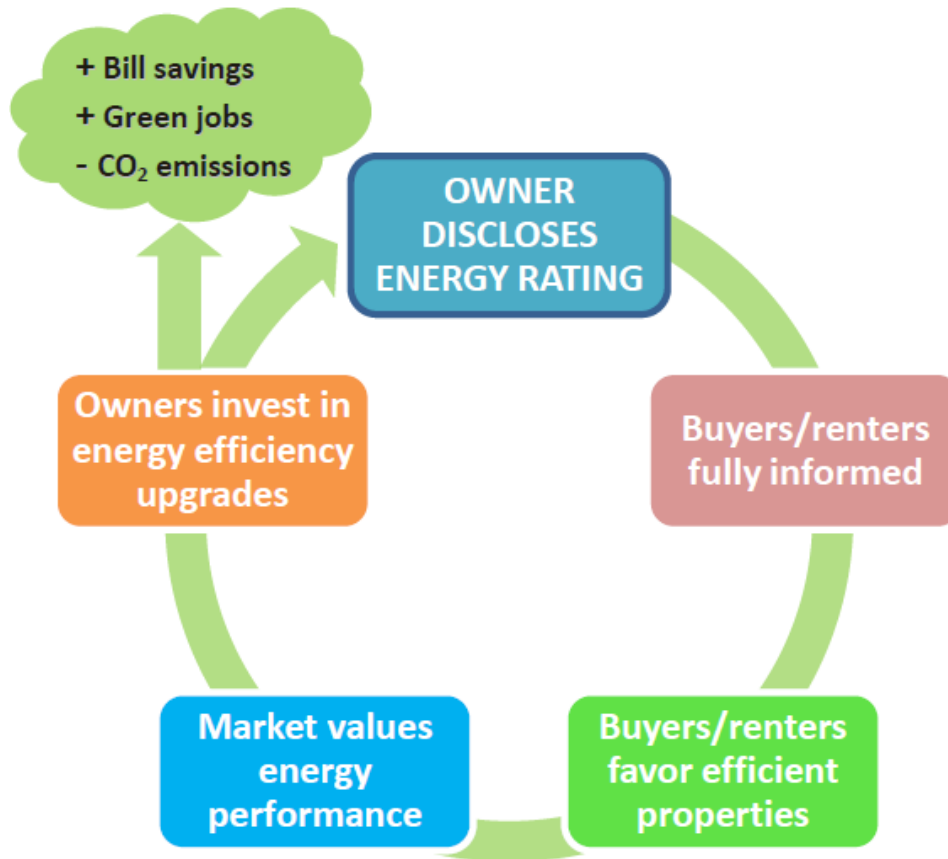
THE BIG PICTURE

Information is Necessary, But Not Sufficient on its Own

| Nutrition Facts | |
|---|---------------------|
| Serving Size 1 potato (148g/5.3oz) | |
| Amount Per Serving | |
| Calories 100 | Calories from Fat 0 |
| % Daily Value* | |
| Total Fat 0g | 0% |
| Saturated Fat 0g | 0% |
| Cholesterol 0mg | 0% |
| Sodium 0mg | 0% |
| Potassium 720mg | 21% |
| Total Carbohydrate 26g | 9% |
| Dietary Fiber 3g | 12% |
| Sugars 3g | |
| Protein 4g | |
| Vitamin A 0% • Vitamin C 45% | |
| Calcium 2% • Iron 6% | |
| Thiamin 8% • Riboflavin 2% | |
| Niacin 8% • Vitamin B ₆ 10% | |
| Folate 6% • Phosphorous 6% | |
| Zinc 2% • Magnesium 6% | |
| <small>*Percent Daily Values are based on a 2,000 calorie diet.</small> | |



Underlying Premise of These Policies



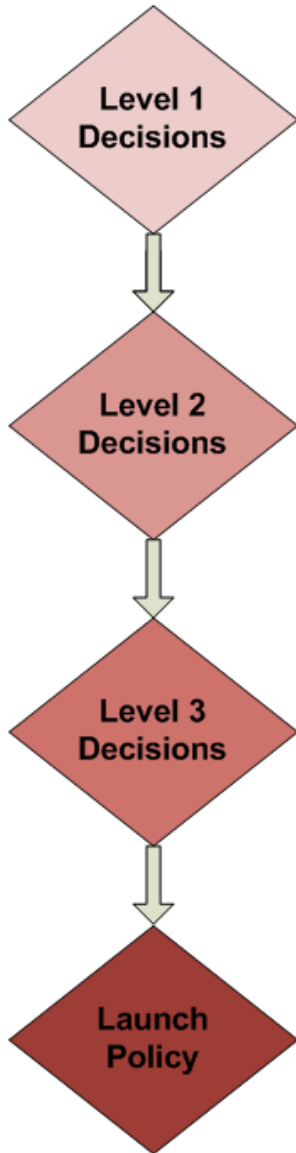
- Disclosure is not sufficient to drive this cycle on its own
- However, it **is** a piece of the puzzle that can be effective when supported by other elements

Other Pieces of the Puzzle

1. Building rating system
2. Rating system management
3. Trigger point
4. Data collection and registry
5. Enforcement
6. Rater infrastructure
7. Phase-in strategy
8. Link to incentive programs, with at least the following elements:
 - Sufficient certified contractors
 - Training for housing professions
 - Quality assurance system
 - Financing
 - Incentives
9. Evaluation plans
10. Outreach and public information campaigns



A Tool For Pulling It All Together



Do you have support from relevant stakeholders?

At what level will this policy be pursued? State or local?

Is there an entity who is willing to implement?

Have you selected a vehicle for the policy?

Do you have a local infrastructure of building raters?

Do you have a local infrastructure of contractors?

Is a financing mechanism in place to enable upgrades?

What will the details of the policy be?

Integration

- How does this policy connect with other building efficiency policies and programs in your jurisdiction?

Scope

- What buildings will be covered? Com? Res? New? Existing?

Energy Performance Information:

- How will energy performance be measured?
- How detailed will the measurement be?
- What information will be communicated? To whom? When? How often?
- How will the energy performance information be presented?
- Will the information be listed publicly or not?

Quality Assurance:

- Who will be responsible for QA?
- When will QA be performed?

Impacts:

- How will impacts be measured?

Resources

- www.buildingrating.org
- “Valuing Building Energy Efficiency through Disclosure and Upgrade Policies: A Roadmap for the Northeast U.S.” Dunsky Energy Consulting for NEEP. 2009.
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- “Improving the Energy Performance of Buildings Learning from the European Union and Australia.” Rand Corporation. 2009.
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- “Berkeley, California: Residential Energy Conservation Ordinance.” American Council for an Energy-Efficient Economy. 2011.
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http://www1.eere.energy.gov/wip/retrofit_guidelines.html
- “Disclose Building Energy Performance (Rating/Label).” Seattle Green Buildings Task Force. 2008.
http://www.seattle.gov/environment/documents/GBTf_BldgEnergy_RatingLabel.pdf
- “About the Energy Conservation Audit and Disclosure Ordinance.” City of Austin. 2011.
<http://www.austinenergy.com/about%20us/environmental%20initiatives/ordinance/index.htm>

In Closing...

- Disclosure and upgrade policies can be effective when they are developed with a robust set of supporting policies and programs in place
- Using a decision tree—such as the one presented here—can increase likelihood of success
- Lessons and successes from early jurisdictions in the U.S. and overseas can provide direction

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