



NORTHEAST ENERGY EFFICIENCY PARTNERSHIPS
Accelerating Energy Efficiency

AESP-NEEC ANNUAL CONFERENCE BUILDING ENERGY RATING

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NORTHEAST ENERGY EFFICIENCY PARTNERSHIPS

“Accelerating Energy Efficiency”



MISSION

Accelerate the efficient use of energy in the Northeast and Mid-Atlantic Regions

APPROACH

Overcome barriers to efficiency through
Collaboration, Education & Advocacy



VISION

Transform the way we think about
and use energy in the world around us.

OVERVIEW -BUILDING ENERGY RATING



- What is it?
- How applied
- Where in play
- Who benefits
- Case study



LABELS / RATINGS



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Signature **fit & fresh**
SANDWICHES

		CALORIES	
		YP2	WHOLE
new! salmon club on croissant	8.69	380	770
napa almond chicken salad on sesame semolina	6.89	340	680
chicken caesar on three cheese	6.99	360	710
chipotle on toast	6.99	390	780



Based on standard U.S. Government tests

ENERGYGUIDE

Water Heater – Natural Gas
Capacity (first hour rating):
57 Gallons

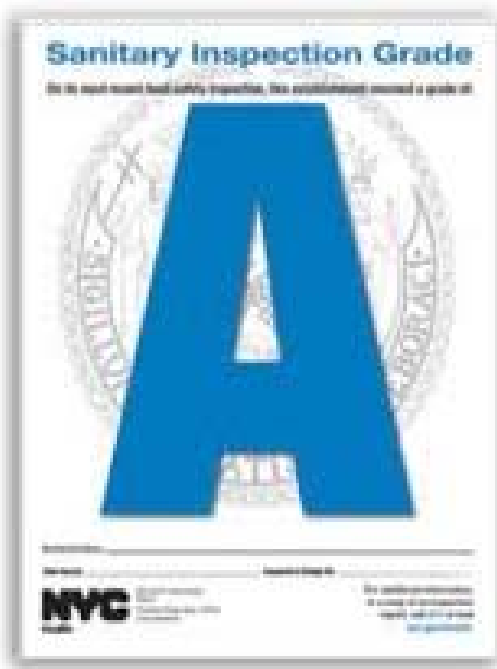
GSW Water Heating Company
Model: JW540SNA
H4400

Compare the Energy Use of this Water Heater with Others Before You Buy.

This Model Uses **268** therms/year

Energy use (therms/year) range of all similar models

Uses Least Energy	238	Uses Most Energy	273
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THE CHALLENGE



- Existing buildings account for 40% of energy and CO₂ emissions
- Most EE programs focus on new construction and natural replacement opportunities
 - Discretionary retrofits often neglected
- Market barriers to EE retrofits are strong
 - Sales and rental markets fail to value energy efficiency
 - Split incentives

AN 'ENERGY GUIDE' FOR BUILDINGS



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VALUING BUILDING ENERGY EFFICIENCY THROUGH DISCLOSURE AND UPGRADE POLICIES A ROADMAP FOR THE NORTHEAST U.S.

A DUNSKY ENERGY CONSULTING REPORT
in collaboration with VERMONT ENERGY INVESTMENT CORPORATION

Philippe Dunsky, *President, DEC*
Jeff Lindberg, *Consultant, DEC*
Emah Piya-Sheard, *Senior Consultant, DEC*
Richard Faasy, *Senior Project Manager, VEIC*

For NORTHEAST ENERGY EFFICIENCY PARTNERSHIPS
under the direction of Ed Schmidt, *Director of Regional Initiatives*

NOVEMBER 2009

INGREDIENTS

- Enabling legislation
- **Rating system**
- Rating system management
- **Trigger points**
- Data collection and registry
- Enforcement
- Rater infrastructure
- Phase in strategy
- Link to incentive programs



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SYNERGIES – POLICY TOOLS

Maximize Energy Savings

- Building codes
 - Encourages compliance
 - Facilitates enforcement
- Voluntary Retrofit Programs
 - Use existing programs
- Financing

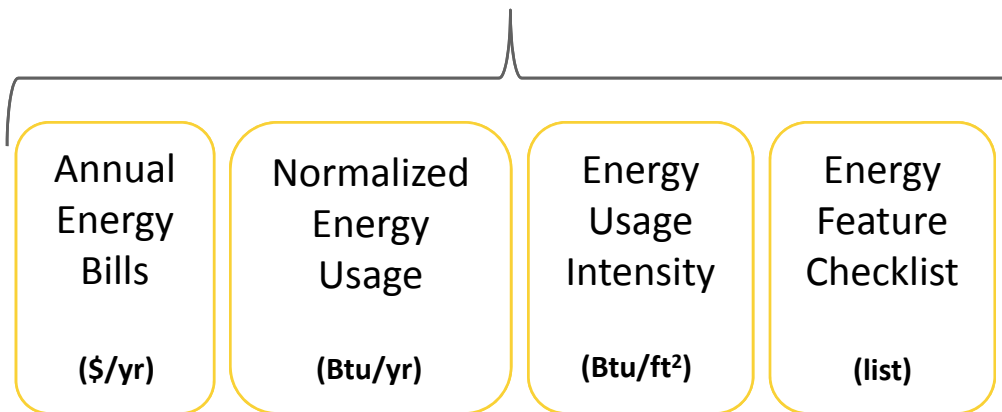


TYPE OF RATING



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Require limited tools/infrastructure.
Provide least valuable information.



Most promising, most complex.

OPERATIONAL RATING
(actual performance)
(rating scale)

ASSET RATING
(modeled performance)
(rating scale)

Audit Results

Complexity / Robustness

DISCLOSURE



- Triggered
 - Sale or lease
- Scheduled
 - Ongoing
 - Energy use

EXAMPLES



NORTHEAST ENERGY EFFICIENCY PARTNERS
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A-

AS DESIGNED

Net-Zero Energy **A+**

High Performance **A**

Very Good **A-**

Good **B**

Fair **C**

Poor **D**

Unsatisfactory **F**

BUILDING ENERGY QUOTIENT™

The Building Energy Quotient™ indicates how much energy this building uses per square foot. The lower the value, the less energy this building consumes. The scale ranges from 1 (best) to 100 (worst). A score of 100 or less is considered "good".

In Europe, the most common energy consumption metric is kilowatt-hours per square meter. To convert from kWh/sq. ft. to kWh/sq. m, multiply by 10.764.

Score of 100

100 kWh/sq. ft. (100 kWh/sq. m)

100 kWh/sq. ft. (100 kWh/sq. m)

100 kWh/sq. ft. (100 kWh/sq. m)

Score of 100

100 kWh/sq. ft. (100 kWh/sq. m)

100 kWh/sq. ft. (100 kWh/sq. m)

100 kWh/sq. ft. (100 kWh/sq. m)

California Energy Performance Disclosure

In conformance with California Code of Regulations, Title 20, Article 9 (2010)

Portfolio Manager
Building Energy Rating

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ENERGY STAR

U.S. Environmental Protection Agency

California Building Energy Performance Rating

Building Information

Building Name: **Grass Valley Office Center**
 Building Owner: **Joe B. Owner**
 Address: **1234 Rolling Hills Rd.**
 City: **Grass Valley**
 Zip Code: **95945**
 Building ID Code: **001234**
 Building Type: **OFFICE**
 Gross Floor Space: **63,900 sq. ft.**

Energy Use Index

Actual: **125 kBtu/sf-yr**
 Weather Normalized: **130 kBtu/sf-yr**

Energy Use Information

Annual Electricity Usage: **591,760 kWh**
 Annual Natural Gas Usage: **13,288 therms**
 Other Annual Energy Usage: **None**
 Total Site Energy Usage: **3,347,902 kBtuh**
 Renewable Energy Production: **None**
 Percent of Electricity from Renewables: **0%**

The Energy Performance Ratings reported here were determined for this building based on recorded energy consumption, building floor area and the following default or actual building characteristics:

Default	Building Data	Building Characteristic
<input type="checkbox"/> 70	<input type="checkbox"/> 70	Weekly operating hours
<input type="checkbox"/> 450	<input type="checkbox"/> 450	Number of occupants
<input type="checkbox"/> 500	<input type="checkbox"/> 500	Number of computers
<input type="checkbox"/> 70	<input type="checkbox"/> 70	Percent floor area cooled
<input type="checkbox"/> 70	<input type="checkbox"/> 70	Percent floor area heated

Building Owner Verification

Date: _____ Signed: _____

Energy Efficiency Rating

	Current	Potential
Very energy efficient - lower running costs		
(92-100) A		
(81-91) B		
(69-80) C		
(55-68) D		
(39-54) E	43	46
(21-38) F		
(1-20) G		
Not energy efficient - higher running costs		
EU Directive 2002/91/EC		

Environmental Impact (CO₂) Rating

	Current	Potential
Very environmentally friendly - lower CO ₂ emissions		
(92-100) A		
(81-91) B		
(69-80) C		
(55-68) D		
(39-54) E		
(21-38) F	38	39
(1-20) G		
Not environmentally friendly - higher CO ₂ emissions		
EU Directive 2002/91/EC		

WHO BENEFITS

- Property Owners
- Buyers and Renters
- Commercial Buildings
- Energy Auditors
- Contractors
- Developers
- Realtors
- Energy Service Companies (ESCOS)
- Utilities
- Financial lenders



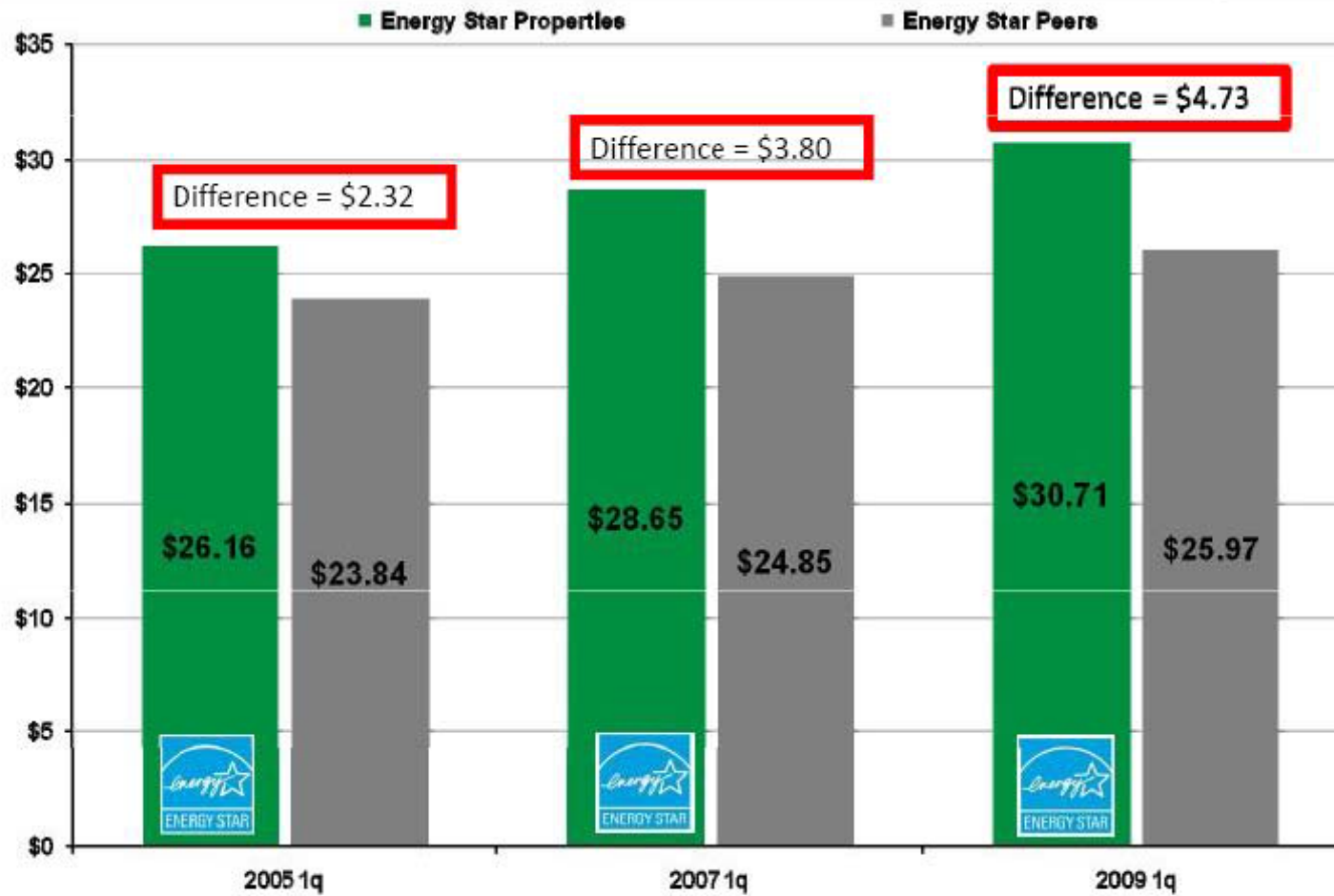
DOING WELL BY DOING GOOD



NORTHEAST ENERGY EFFICIENCY PARTNERSHIP
Generating Energy Efficiency

Presented by Jay Spivey and Norm Miller

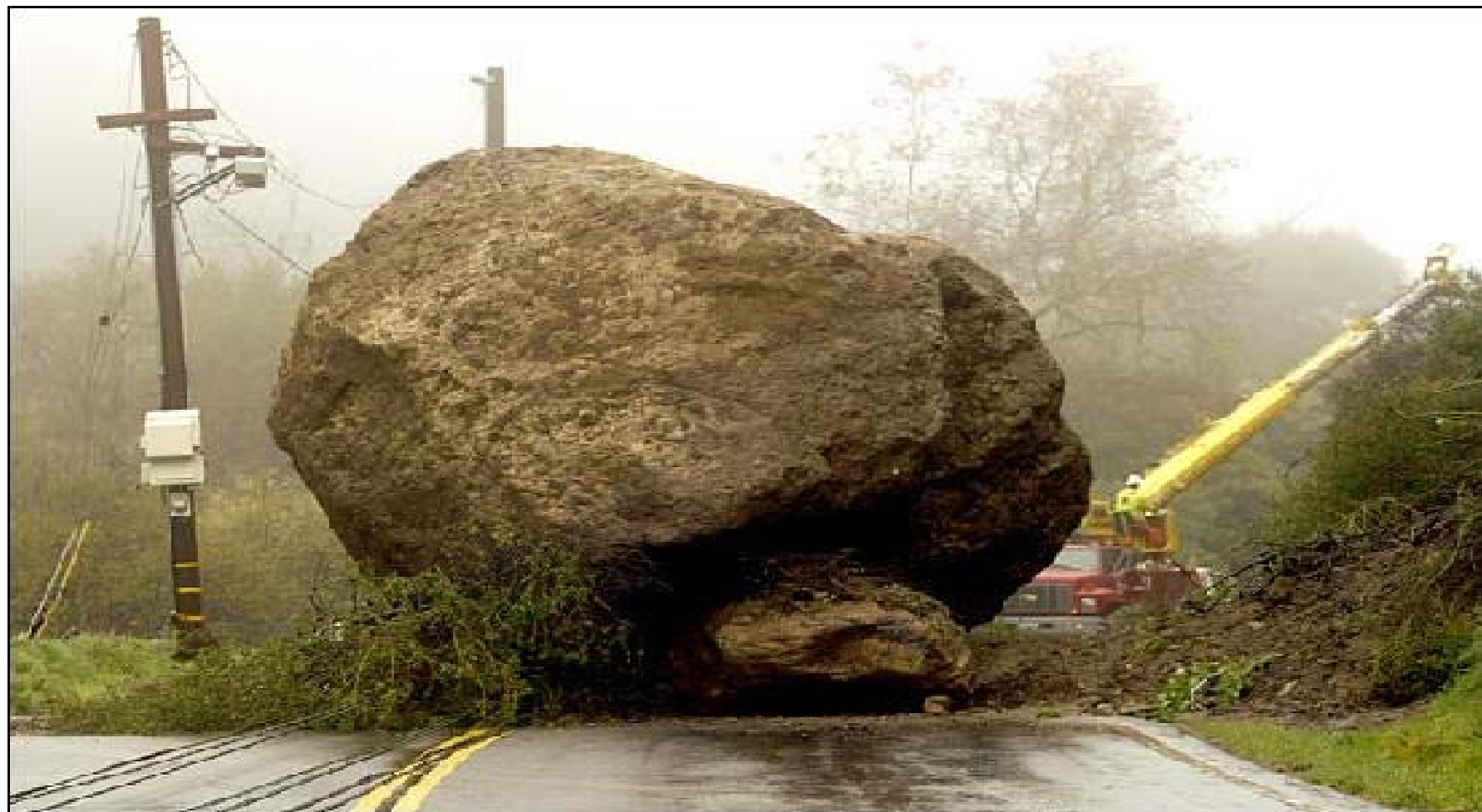
Direct Rental Rates



BARRIERS



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OBSTACLES



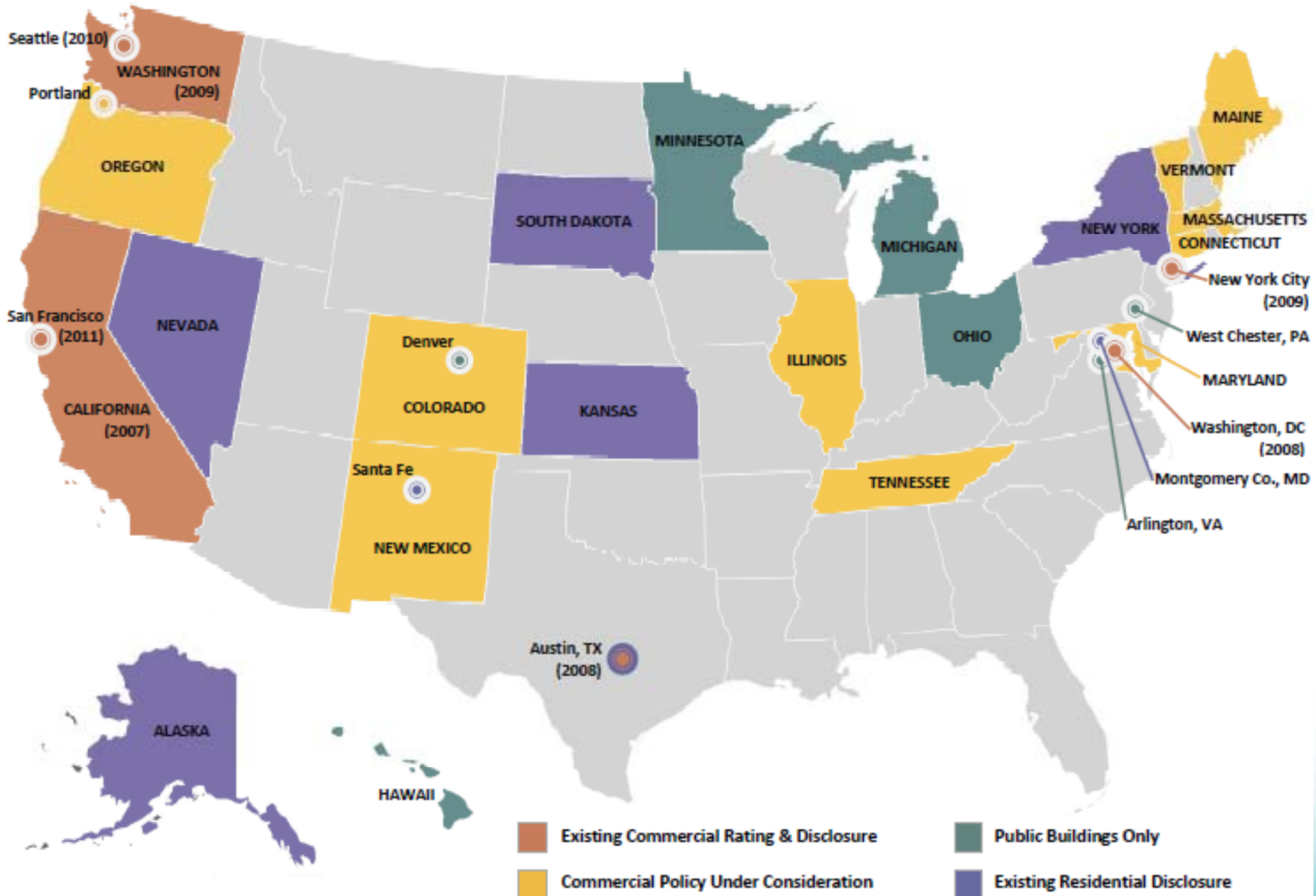
- Split incentives (landlord/tenant)
- Tenant turnover
- Lack of information/understanding
- Discounting energy savings
- Financing
- metrics used

Opportunity:
Existing buildings retrofits

U.S. Building Rating and Disclosure Policies



For more information, please contact Caroline Keicher, Institute for Market Transformation at (202) 525-2883, caroline@imt.org
To access this document online, see www.imt.org/rating or www.buildingrating.org



CASE STUDY

CITY OF SEATTLE BUILDING ENERGY BENCHMARKING AND REPORTING ORDINANCE



Enacted: January 2010 , **Implementation:** 2011-2013

- Mission: to make green building standard practice in Seattle
- Support the Green Building Capital Initiative goal to reduce energy consumption
- Applies to:
 - Public buildings > 10,000 sq.ft.
 - Private non-residential buildings > 50,000 sq.ft.,
 - Multifamily buildings > 5 units
- 3 components
 - Benchmarking
 - Disclosure
 - Reporting
- Analysis shows that building retrofits inspired
- by this ordinance alone will create 150 new jobs.



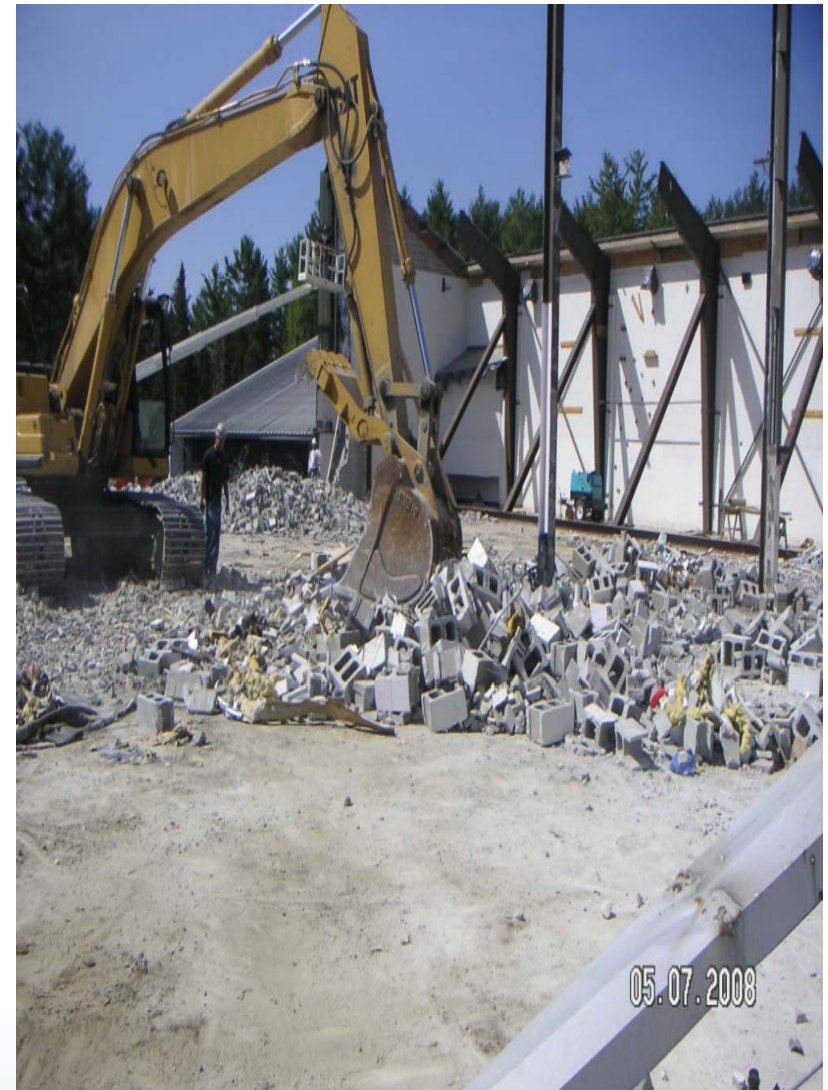
KEYS TO SUCCESS

- Trusted Rating System
- Clear Messaging
- Strong Enforcement
- Timely (early) Disclosure
- Link to Action

What do you want to see....



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RESOURCES



City of Seattle

<http://www.seattle.gov/dpd/GreenBuilding/OurProgram/EnergyBenchmarkingDisclosure/Overview/>

IMT / Building Rating.org

<http://www.buildingrating.org/>

http://www.buildingrating.org/Building_Energy_Transparency_Implementation_Report

Northeast Energy Efficiency Partnerships (NEEP)

<http://neep.org/>



THANK YOU

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