DOE Technical Assistance Program

U.S. DEPARTMENT OF **ENERGY** | Energy Efficiency & Renewable Energy

Advanced Topics for the Portfolio Manager Initiative: Energy Disclosure Policy Implementation

December 20, 2011

Joel Blaine, DOE

U.S. DEPARTMENT OF **ENERGY** | Energy Efficiency & Renewable Energy

This presentation is brought to you by DOE's Technical Assistance Program (TAP) in collaboration with The Institute for Market Transformation (IMT).

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Advanced Topics for the Portfolio Manager Initiative:

Energy Disclosure Policy Implementation

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IMT
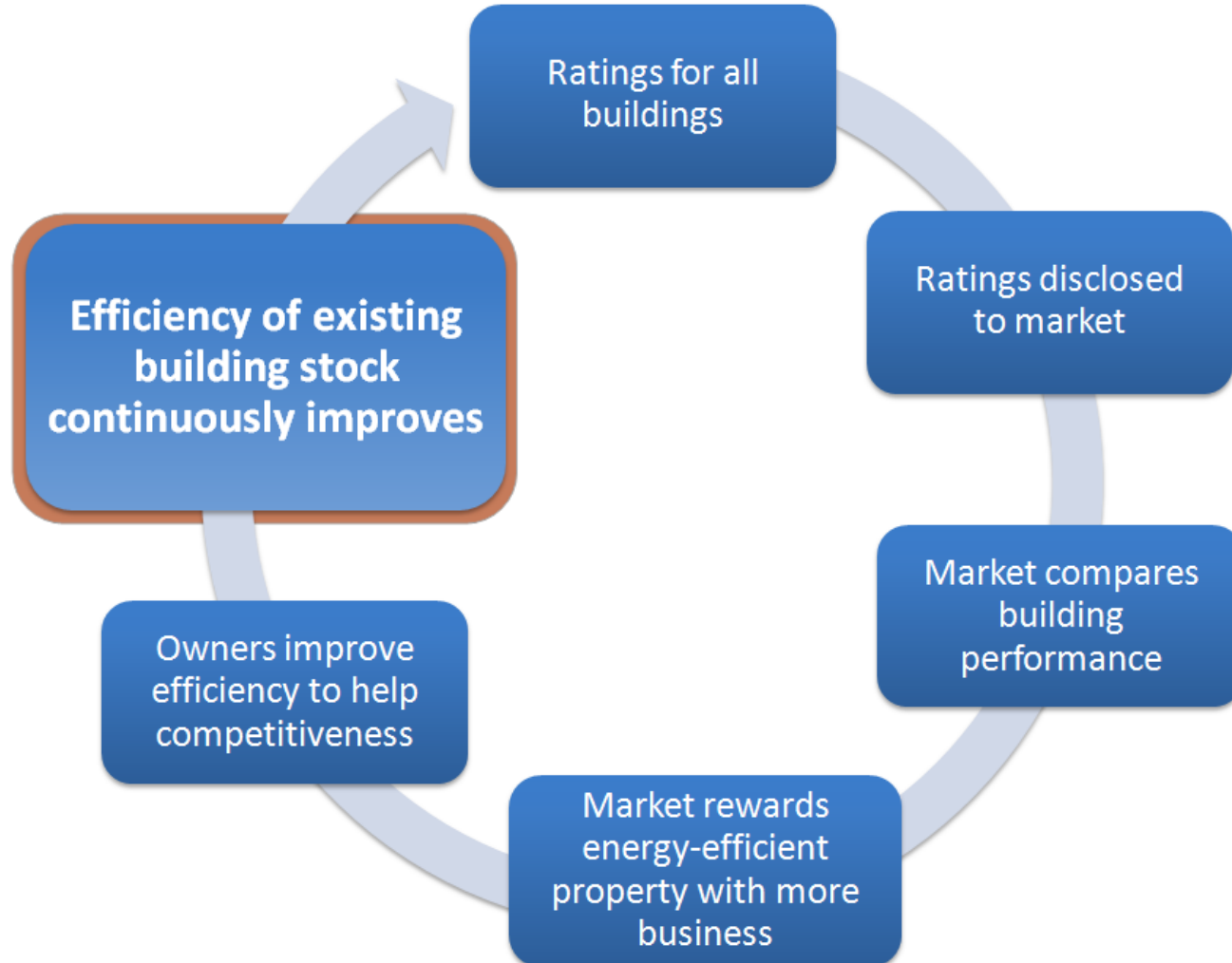Institute
for Market
Transformation

What is rating and disclosure?

Why would you do it? What are the benefits?

"When performance is measured, performance improves. When performance is measured and reported back, the rate of improvement accelerates."   -Thomas S. Monson

Ratings for all buildings

Ratings disclosed to market

Market compares building performance

Market rewards energy-efficient property with more business

Owners improve efficiency to help competitiveness

Efficiency of existing building stock continuously improves

Where is it happening? Around the World.

2004: Norway, part of the European Economic Area, formally agrees to implement the EPBD and building certification requirements

2007: Brazil adopts voluntary building rating regulations that become mandatory in 2012

1997: Denmark requires energy certification for homes and buildings

| 1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012

2002: The European Parliament adopts the Energy Performance of Buildings Directive (EPBD), requiring all **EU Member States** to establish mandatory energy certification schemes for homes and buildings
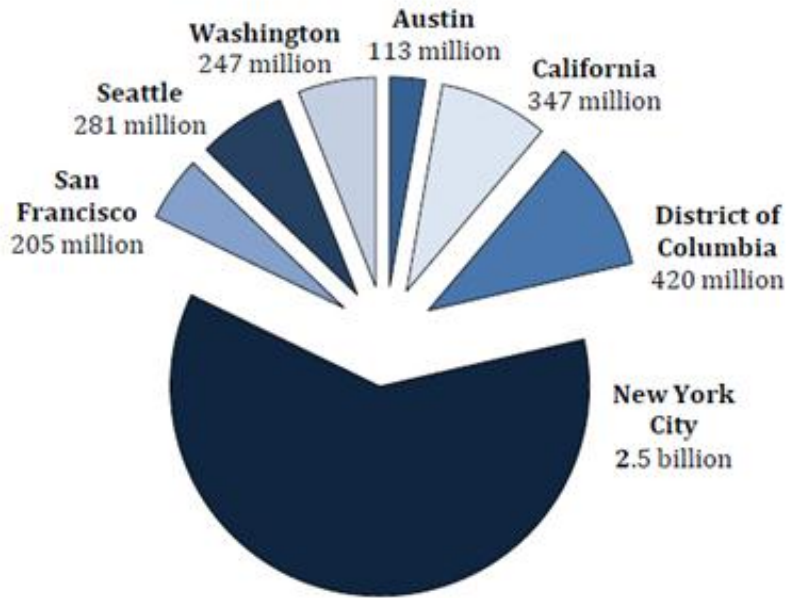
2008: China adopts a mandatory energy rating program for government buildings. **Turkey** adopts a mandatory certification scheme

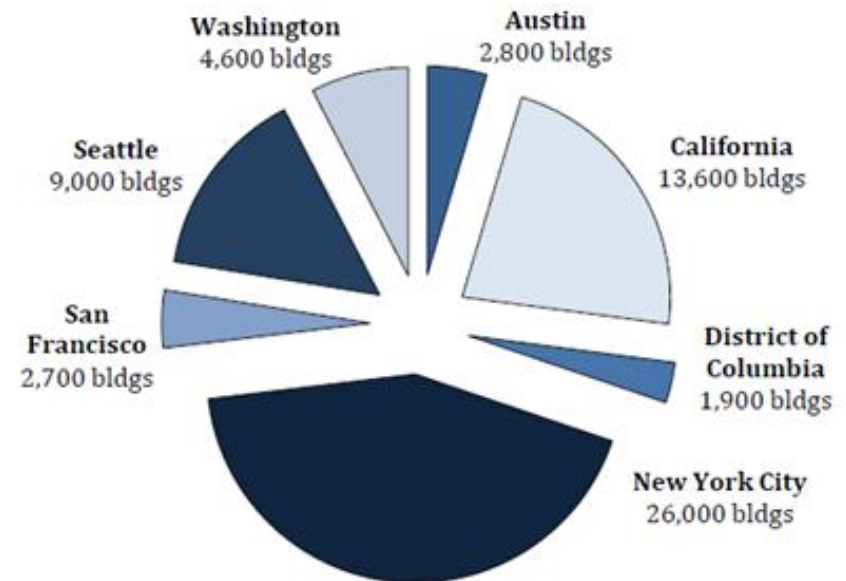**2010: Australia** adopts a mandatory building certification scheme

And, more recently, in the United States
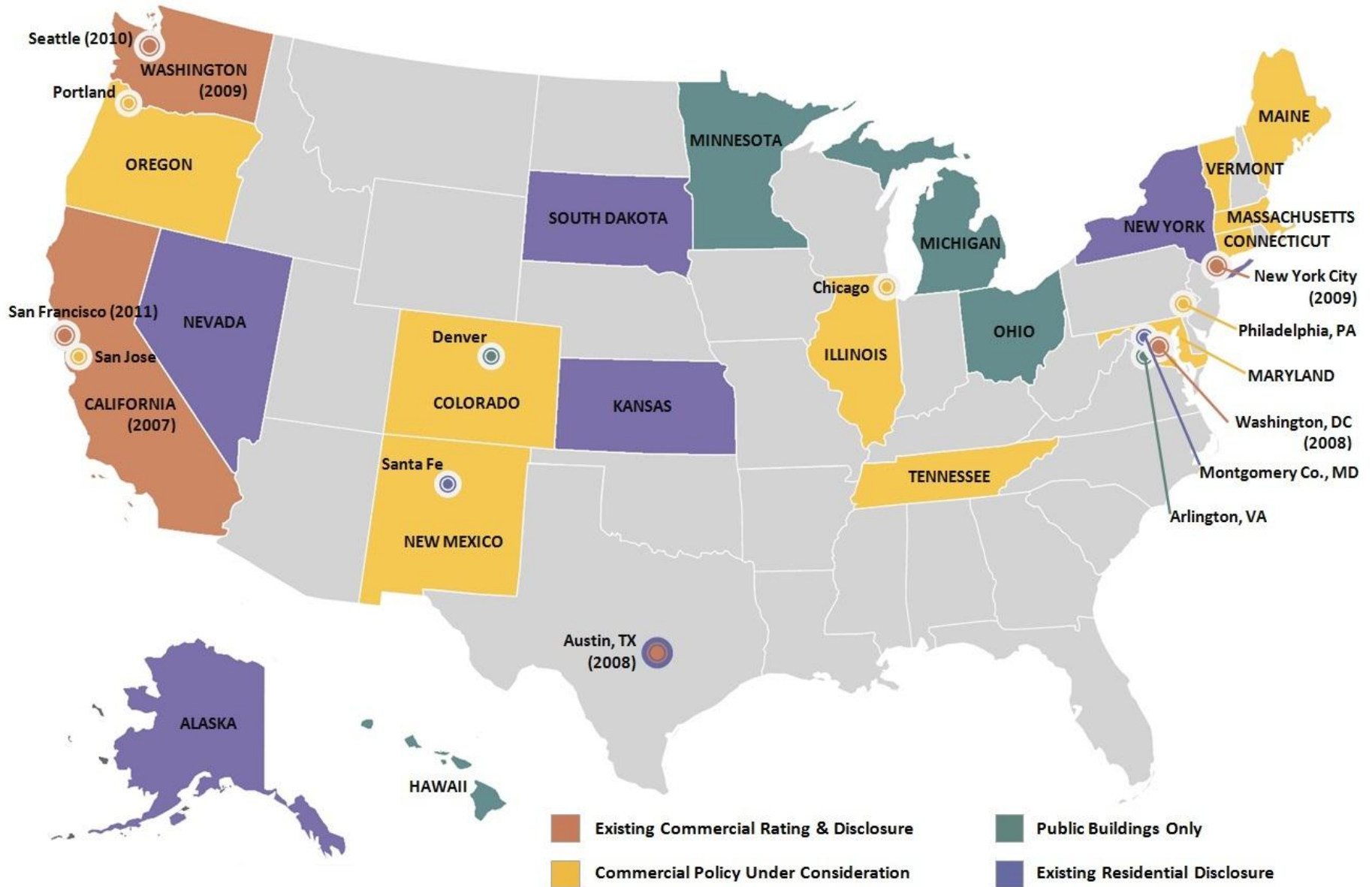
Policy impact is already significant

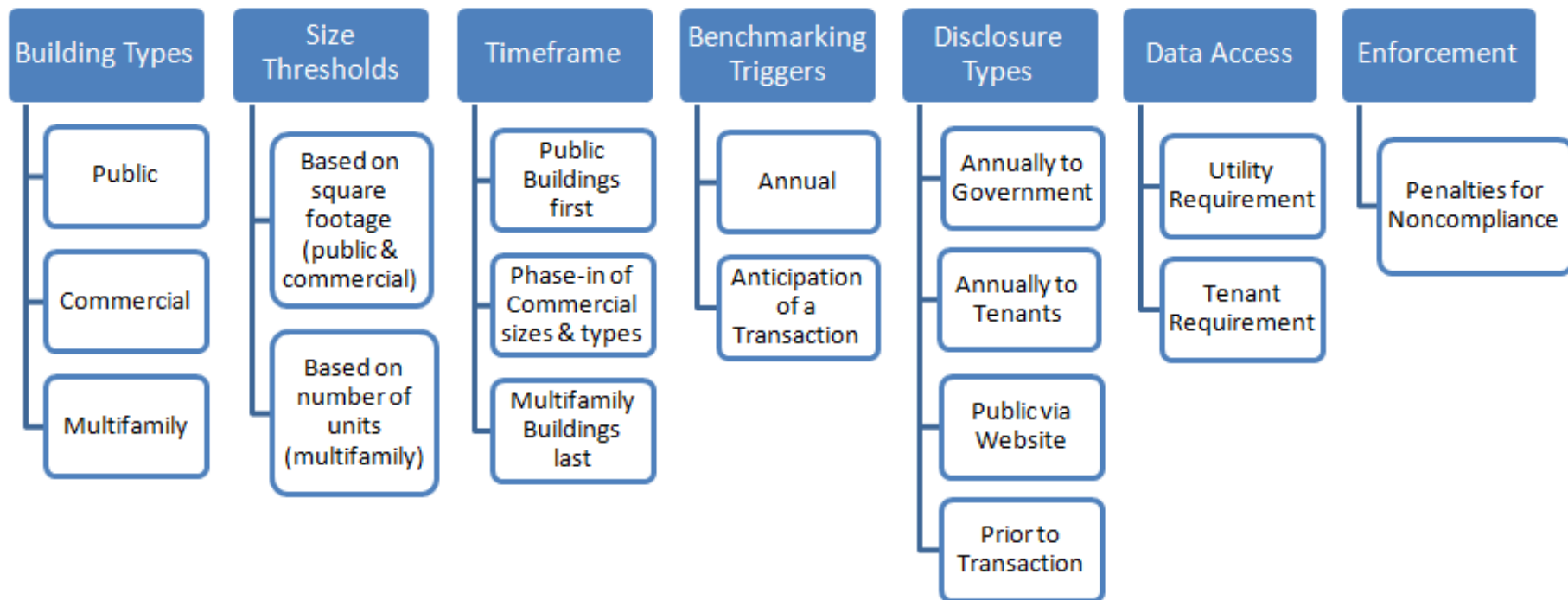**Annual Policy Impact Projection on Building Area (in Square Feet) by Jurisdiction**

Washington 247 million
Austin 113 million
California 347 million
Seattle 281 million
San Francisco 205 million
District of Columbia 420 million
New York City 2.5 billion

Annual Policy Impact Projection on Number of Buildings by Jurisdiction

Washington 4,600 bldgs
Austin 2,800 bldgs
Seattle 9,000 bldgs
California 13,600 bldgs
San Francisco 2,700 bldgs
District of Columbia 1,900 bldgs
New York City 26,000 bldgs

- Approximately 4 billion square feet
- More than 3x the floor area of every Walmart, Target, Home Depot, Barnes & Noble and Costco store in America

Rating & disclosure policy elements

Building Types	Size Thresholds	Timeframe	Benchmarking Triggers	Disclosure Types	Data Access	Enforcement
Public	Based on square footage (public & commercial)	Public Buildings first	Annual	Annually to Government	Utility Requirement	Penalties for Noncompliance
Commercial	Based on number of units (multifamily)	Phase-in of Commercial sizes & types	Anticipation of a Transaction	Annually to Tenants	Tenant Requirement	
Multifamily		Multifamily Buildings last		Public via Website		
				Prior to Transaction		

IMT is finalizing a new **Model Legislation and Policy Development Guide** for rating and disclosure – please email caroline@imt.org if you'd like to be sent a copy when available (late December/early January)

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Policies vary by jurisdiction

All U.S. policies leverage the ENERGY STAR Portfolio Manager tool

| Jurisdiction | Benchmarking (Building Type and Size) | | Disclosure | | | | | |
| | Non-residential | Multi-family | On public web site | To local government | To tenants | To transactional counterparties | | |
						Sale	Lease	Financing
Austin	10k SF+	-	-	✓	-	✓	-	-
California*	1k SF+	-	-	✓	-	✓	✓	✓
District of Columbia	50k SF+	50k SF+	✓	✓	-	-	-	-
New York City	50k SF+	50k SF+	✓	✓	-	-	-	-
San Francisco	10k SF+	-	✓	✓	✓	-	-	-
Seattle	10k SF+	5+ units	-	✓	✓	✓	✓	✓
Washington	10k SF+	-	-	-	-	✓	✓	✓

Implementation Roundtable

Roundtable on Implementing Benchmarking & Disclosure Policy

- Nov. 2010 in Washington, DC
- Nation's first event on policy implementation – assessing policy implementation challenges, best practices and opportunities for harmonization
- Attendees included:

- Austin Energy
- California Energy Commission
- California Public Utilities Commission
- District of Columbia Department of the Environment
- Maryland Energy Administration
- Massachusetts Dept. of Energy Resources
- New York City Mayor's Office of Long-Term Planning & Sustainability
- Pacific Northwest National Laboratory
- Portland Bureau of Planning and Sustainability
- San Francisco Dept. of the Environment
- Seattle Dept. of Planning & Development
- Washington State Dept. of General Administration
- U.S. Environmental Protection Agency, ENERGY STAR division

- ACEEE
- ICLEI Local Governments for Sustainability
- U.S. Green Building Council
- Northeast Energy Efficiency Partnerships
- Heschong-Mahone Group
- New Buildings Institute
- Transwestern
- Sustainable Energy Partnerships
- Resource Media

Building Energy Transparency:
A Framework for Implementing U.S. Commercial Energy Rating & Disclosure Policy

Challenges and Best Practices of Implementation in 6 key areas:

- **Outreach, Education and Training**
- Benchmarking Guidance
- **Compliance and Enforcement**
- Data Quality Assurance
- Energy Consumption Data
- Disclosure
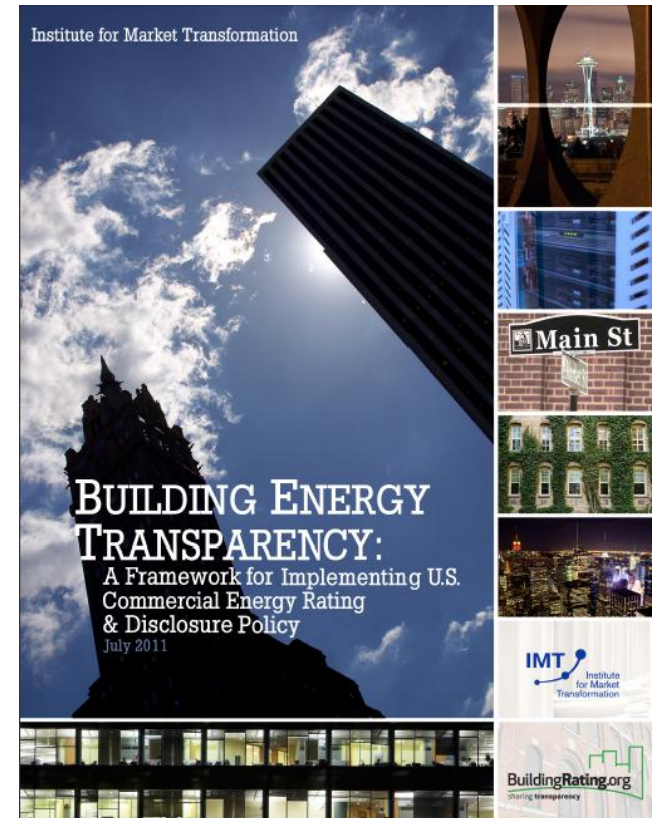
Existing Commercial Buildings Energy Performance Ordinance
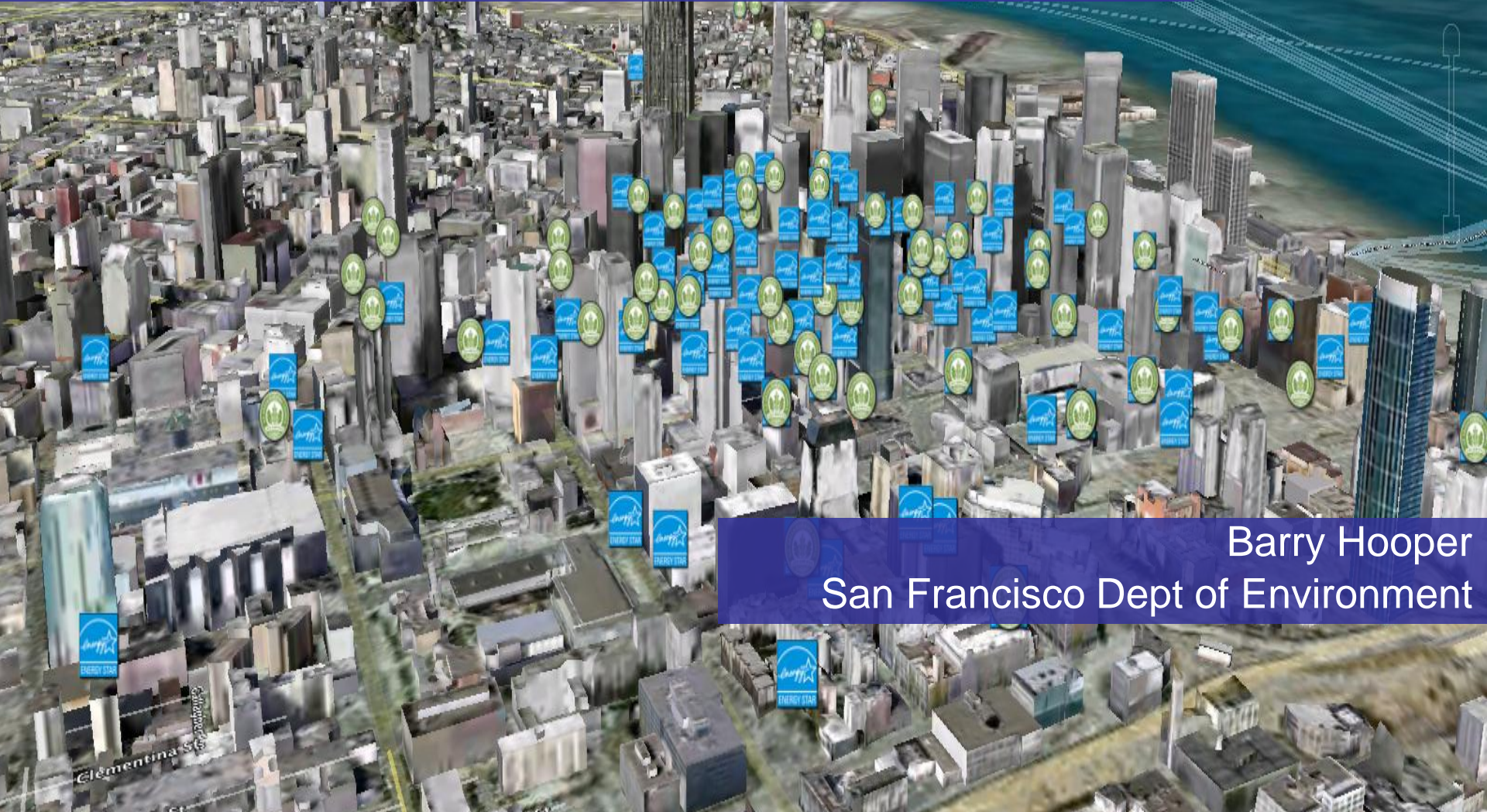
Barry Hooper
San Francisco Dept of Environment

Map: Green Buildings in San Francisco

Courtesy: Google and Cyber City 3D

Mission:
- Improve, enhance, and preserve the environment
- Promote San Francisco's long-term well being

Green Building

Policy

Incentives

Technical Assistance

Outreach

| Municipal | Commercial | Residential |

Mayor's Task Force on **Existing Commercial Buildings**

Final Report and Recommendations For The City and County of San Francisco

December 2009

Scope
– Existing Commercial

Composition
– Owners' Representatives
– Property Managers
– Contractors
– Operators
– Engineers
– Architects
– Finance
– Utilities

The Task
– Cost effective energy savings
– Minimum costs
– Measureable

Existing Commercial Buildings:
Recommended Strategy

- Identify potential savings
- Enable informed decisions
- Engage tenants
- Lead by example in public facilities
- Access to capital
- Educate and mentor
- Submetering

Existing Commercial Buildings Energy Performance Ordinance

Passage of Ordinance	2011 (October 1)	2012 (April 1)	2013 (April 1)	2014 (April 1)
Outreach Early action	Benchmark >50K sq ft [1]	Benchmark >25K sq ft [Disclose >50K sq ft]	Benchmark >10K sq ft [Disclose >25K sq ft]	Continue benchmarking [Disclose >10K sq ft]

[1] First year data is confidential

plaNYc

THE NEW YORK CITY
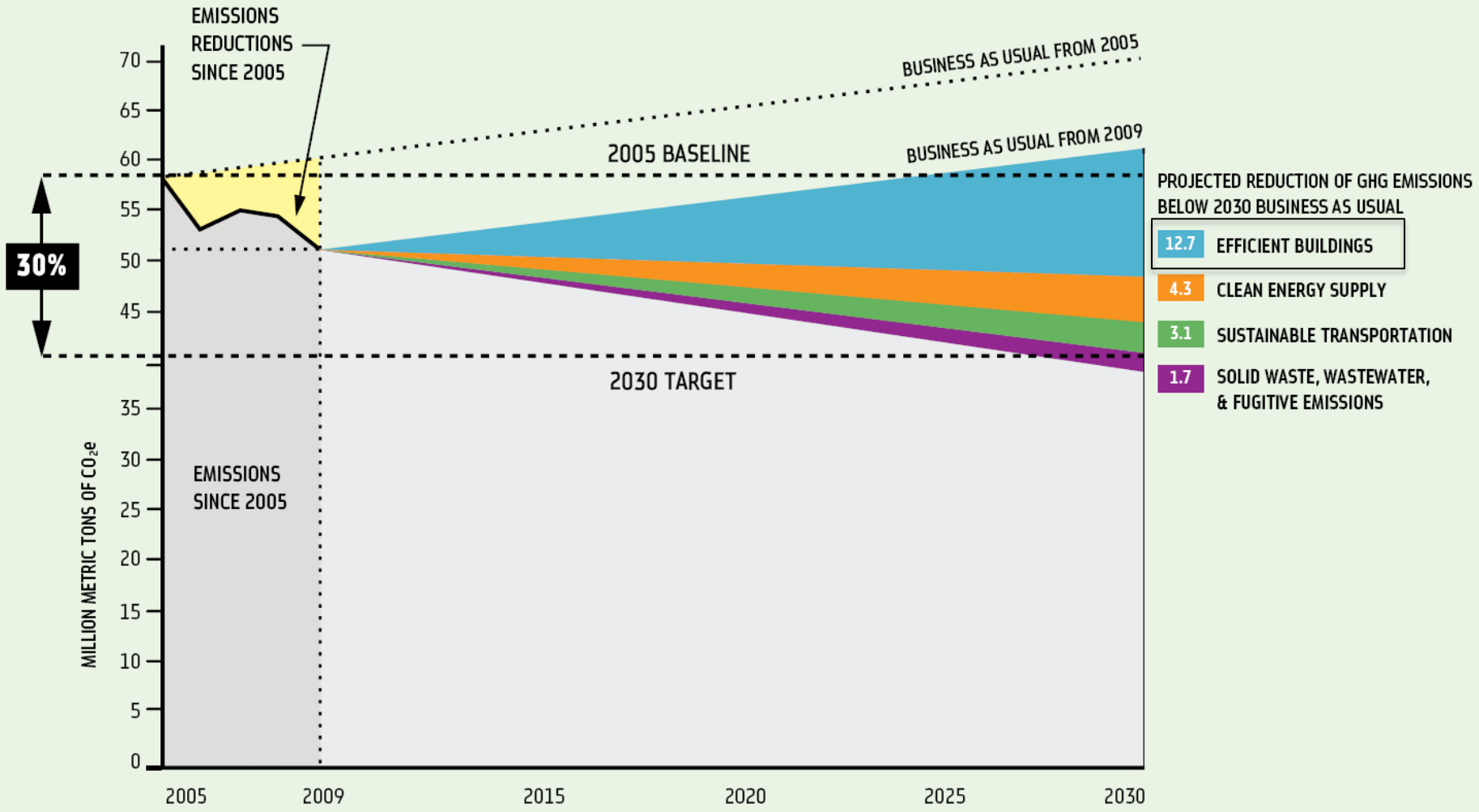# GREENER, GREATER
BUILDINGS PLAN

1 New York City Energy Code

2 Lighting Upgrades and Sub-Metering

3 Benchmarking

4 Audits and Retro-Commissioning

LOTS WITH BUILT AREA OF 50,000 SQUARE FEET OR GREATER
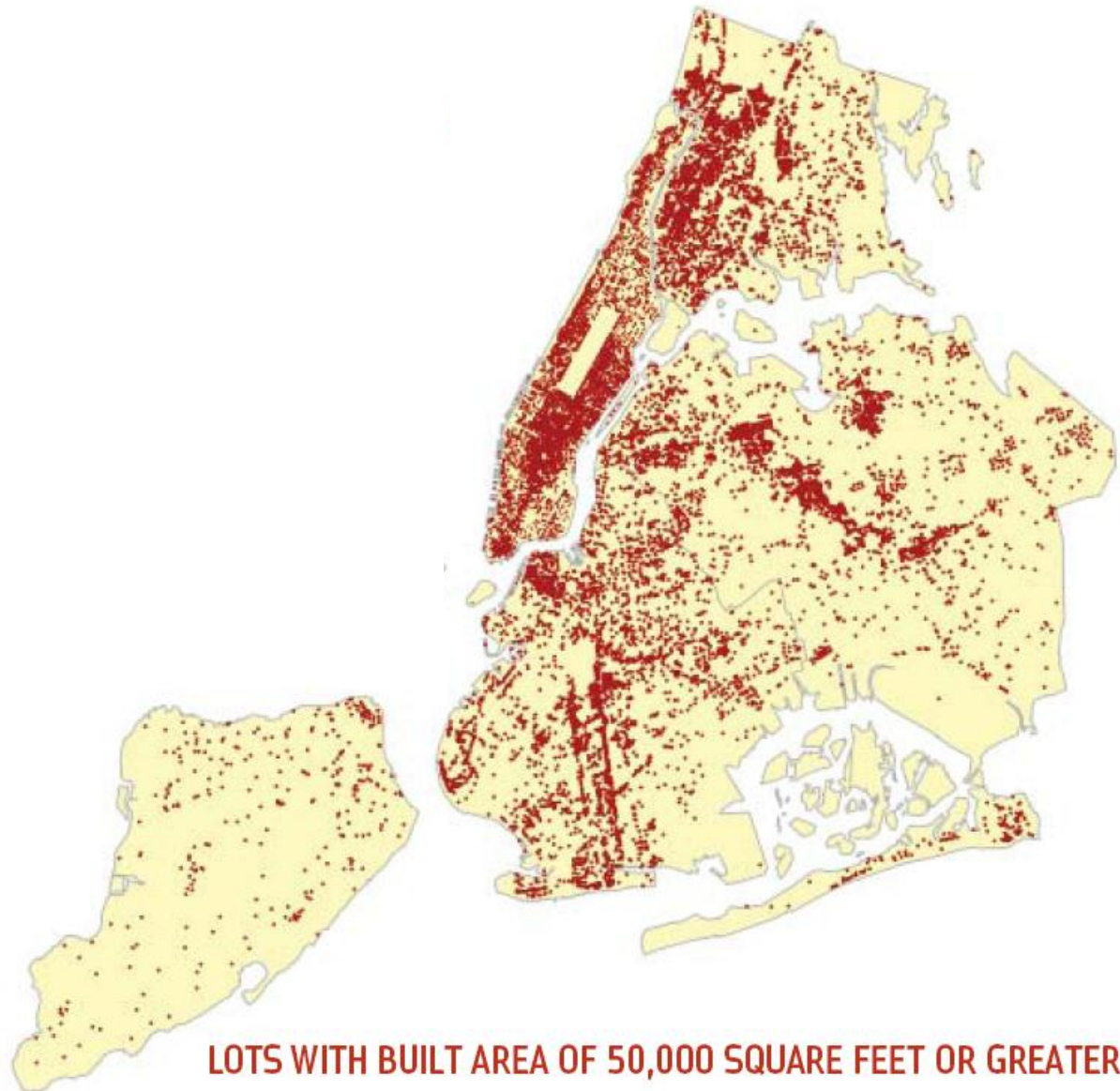
Projected Impacts of Our Greenhouse Gas Reduction Strategies

Source: NYC Mayor's Office and M.J. Beck Consulting, LLC

Focus on large buildings

planYC

Total Building Area by Building (Lot) Size

Type	All Buildings		Buildings >= 25,000 sf		Buildings >= 50,000 sf	
	Lots	Bldg Area	Lots	Bldg Area	Lots	Bldg Area
Residential	748,661	3,564,219,392	16,381	1,655,467,445	9,384	1,402,209,618
Commercial	32,638	865,940,624	3,724	708,491,558	2,229	656,793,149
Industrial	12,665	333,482,361	2,610	251,677,947	1,309	206,732,698
Institutional	10,320	425,582,946	2,862	370,632,355	1,884	335,610,234
Public	630	68,290,399	188	63,934,298	108	61,095,082
Total	**804,914**	**5,257,515,722**	**25,765**	**3,050,203,603**	**14,914**	**2,662,440,781**

Percent of Total Building Area by Building Size

Type	All Buildings		Buildings >= 25,000 sf		Buildings >= 50,000 sf	
	Lots	Bldg Area	Lots	Bldg Area	Lots	Bldg Area
Residential	1%	67.8%	2.04%	31.5%	1.17%	26.7%
Commercial	5%	16.5%	0.46%	13.5%	0.28%	12.5%
Industrial	7%	6.3%	0.32%	4.8%	0.16%	3.9%
Institutional	8%	8.1%	0.36%	7.0%	0.23%	6.4%
Public	8%	1.3%	0.02%	1.2%	0.01%	1.2%
Total	**0%**	**100.0%**	**3.20%**	**58.0%**	**1.85%**	**50.6%**

NYC has over 800,000 building lots containing almost a million buildings

…but over half of that area is housed in less than 2% of the lots

Benchmarking – LL 84

Why Benchmark?

- Transparency
- Conservation
- Market Transformation

Requirements

- All buildings over 50,000 square feet
- Annually submit energy and water consumption using EPA's Portfolio Manager

Public Disclosure

- September 1, 2011 – City government buildings
- September 1, 2012 – Non-residential buildings
- September 1, 2013 – Residential buildings

Benchmarking Resources

planYC

Resources

- Weekly 3-hours classes*

- Online trainings

- Step-by-step instructions (Checklist)

- Benchmarking Help Center* (call-in hotline)

- Step-by-step and FAQ on whole building electricity data

Partners

- Assoc for Energy Affordability

- EPA

- Urban Green Council and the Related Companies

- CUNY graduate students

- Con Edison - providing whole building energy data

* Funded by NYSERDA

Benchmarking – LL84

- All City-owned buildings have been benchmarked for the second year. Includes 2730 buildings and 260 million square feet.
- Scores and EUI's for City-owned buildings are publically posted; Report recently released:
   http://www.nyc.gov/html/dem/downloads/pdf/Benchmarking%20Report%2011-23-11.pdf
- **Private sector buildings have submitted for the first time with approximately 67% compliance and 1.5 billion sf. of space**; Second deadline Dec. 31
- Working with university partners to analyze the data

What's Next

2012:

- Second annual Policy Roundtable with ~25 states and cities in late February/early March

- Energy savings and job creation analysis on benchmarking and disclosure policy

- **Policy development guidance and design report w/ model policy language**

- U.S. DOE energy disclosure platform
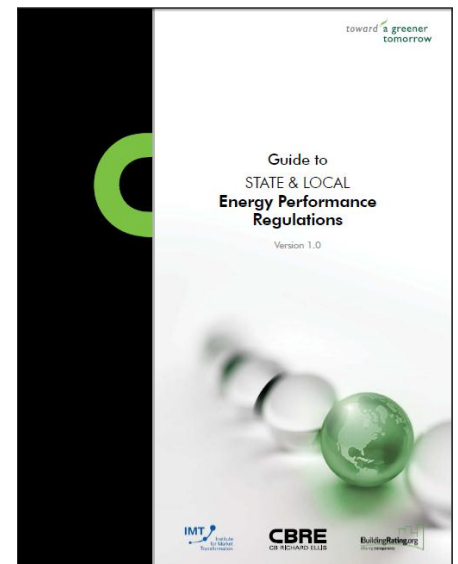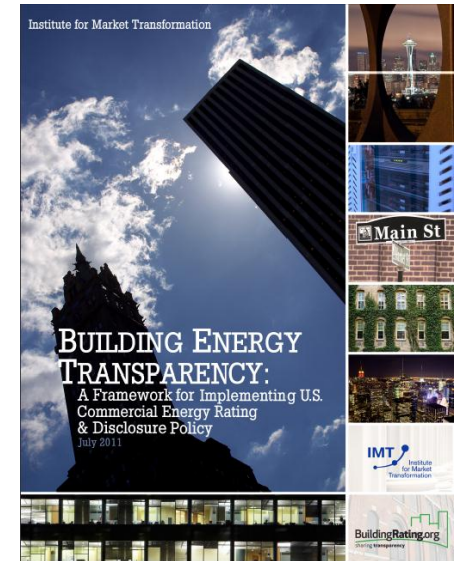
Resources

- **IMT policy implementation framework**
  www.buildingrating.org/Building_Energy_Transparency_Implementation_Report

- **CB Richard Ellis/IMT regulatory guide**
  www.cbre.com/USA/Sustainability/Envirometrics

- **IMT/ICLEI Commercial Energy Policy Toolkit**
  www.imt.org/commercialenergypolicytoolkit

- **IMT/ICLEI RFA for free technical assistance**
  www.icleiusa.org/climate_and_energy/energy-efficiency-resources-1/commercial-energy-policy-toolkit/apply-now-for-free-technical-assistance

- **IMT's informal rating network**
  To join, email: caroline@imt.org

- **State & Local Energy Efficiency Action Network**
  www1.eere.energy.gov/seeaction/resources.html#fact
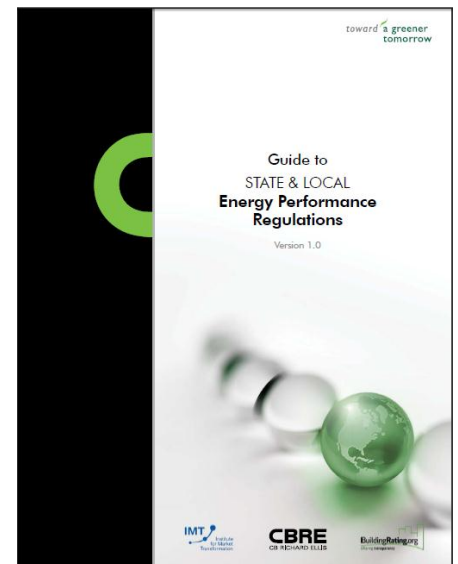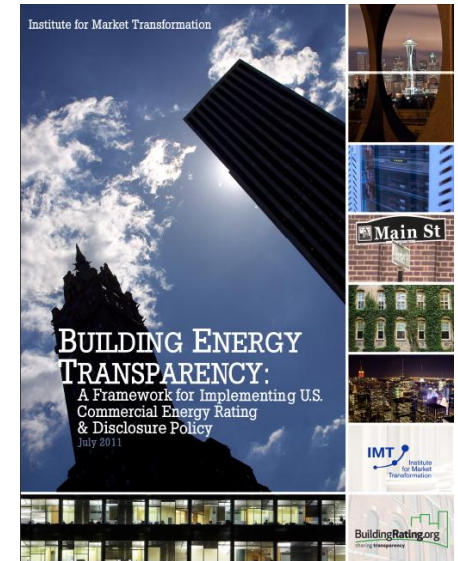
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What information from this or any previous benchmarking webinars would you like more detail?

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