



Rating & Reporting and Energy Efficiency for Commercial & Industrial (C&I) Building Owners: *Proposed Requirements*



City of Boulder
Wednesday, March 18, 2015

Agenda



- ❑ Key Definitions
- ❑ City Council's Directive
- ❑ Objectives & Community Benefit
- ❑ Public Process / Community Engagement
- ❑ Options for Proposed Requirements
- ❑ Estimated Costs and Savings
- ❑ Proposed Timeline
- ❑ Discussion

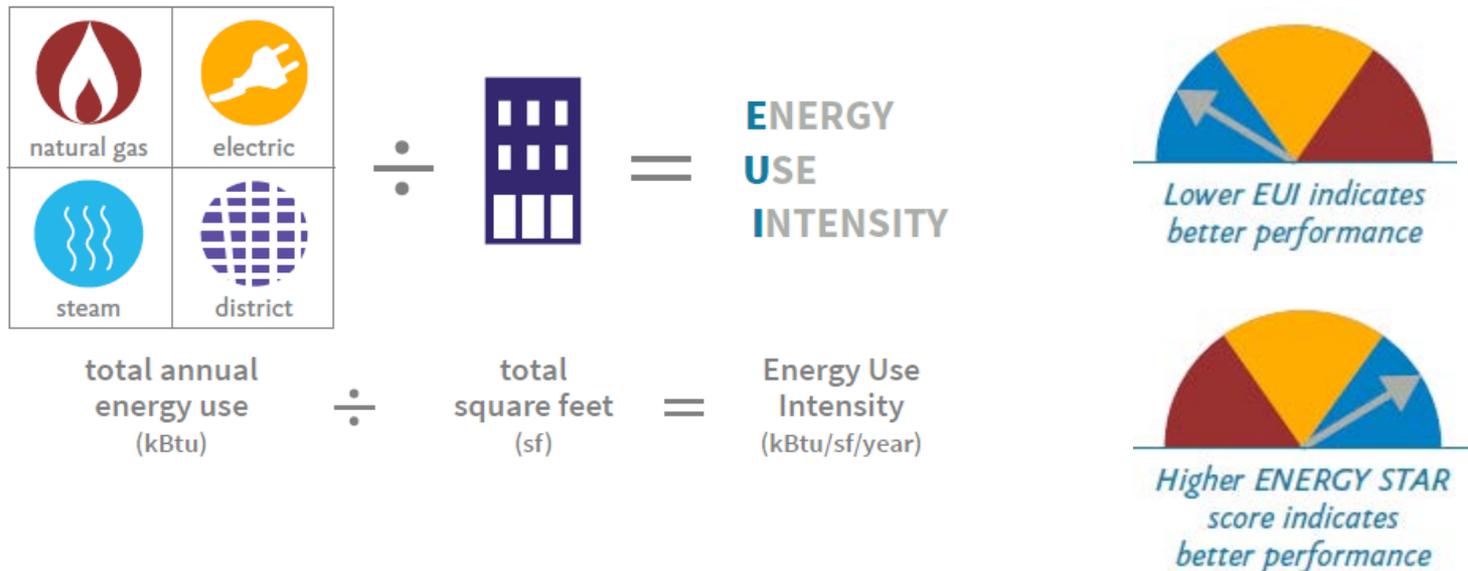
Key Definitions



1) What is Rating & Reporting ?(Benchmarking & Disclosure)

- **“Rating”** is the process of measuring and comparing energy performance metrics (such as the normalized energy use of a building) to other similar buildings
- **“Reporting”** means disclosing the energy use and associated ratings to the city and other various parties (such as the public or interested buyers and tenants)

2) Energy Use Intensity (EUI) = a building’s total energy use per SF per year



Key Definitions

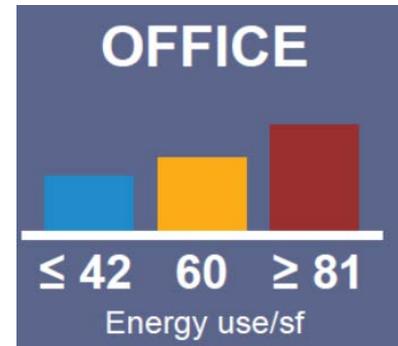


What does a building owner have to do to Rate & Report their building?

1. Collect whole building energy use data
2. Enter or import data into EPA's ENERGY STAR Portfolio Manager (ESPM) Tool
3. Share Portfolio Manager data with City of Boulder

What kind of information will a building owner receive from Rating & Reporting?

Sample Data



Your Building's EUI:

77

kBtu/sf

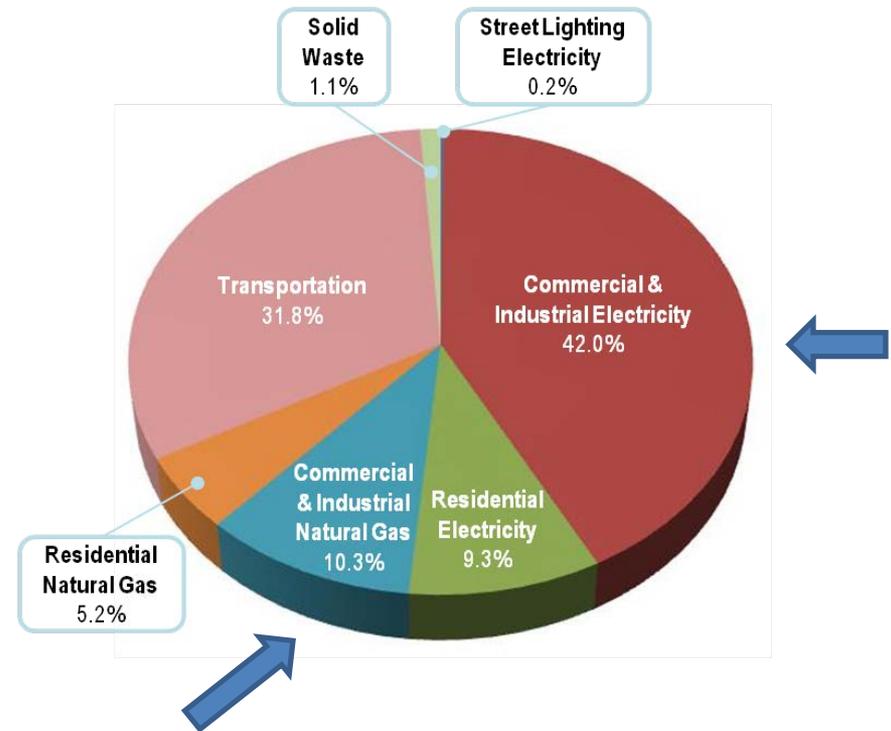
City Council's Directive

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- 2012: Council directs staff to propose options for required efficiency in commercial and industrial (C&I) buildings
- 2013: Council gives preliminary direction for Climate Commitment Goal
- 2014-2015: Council reaffirms efficiency in C&I buildings as a top priority

2012 Greenhouse Gas (GHG) Inventory

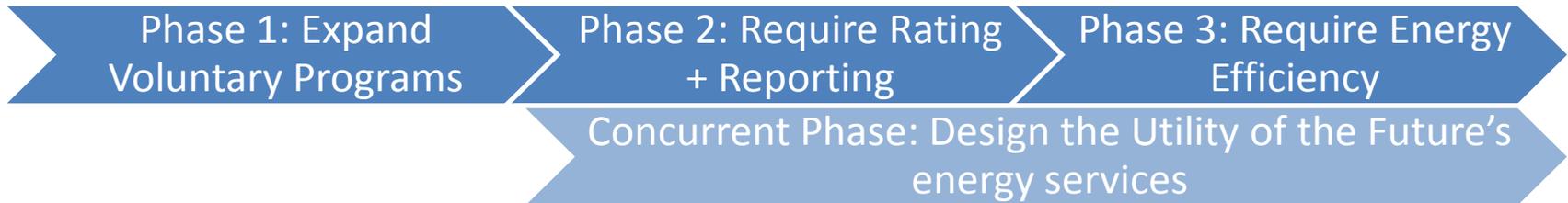


City of Boulder Climate Commitment:
**Reduce GHG Emissions by 80% by
2050**



Phased Approach for C&I

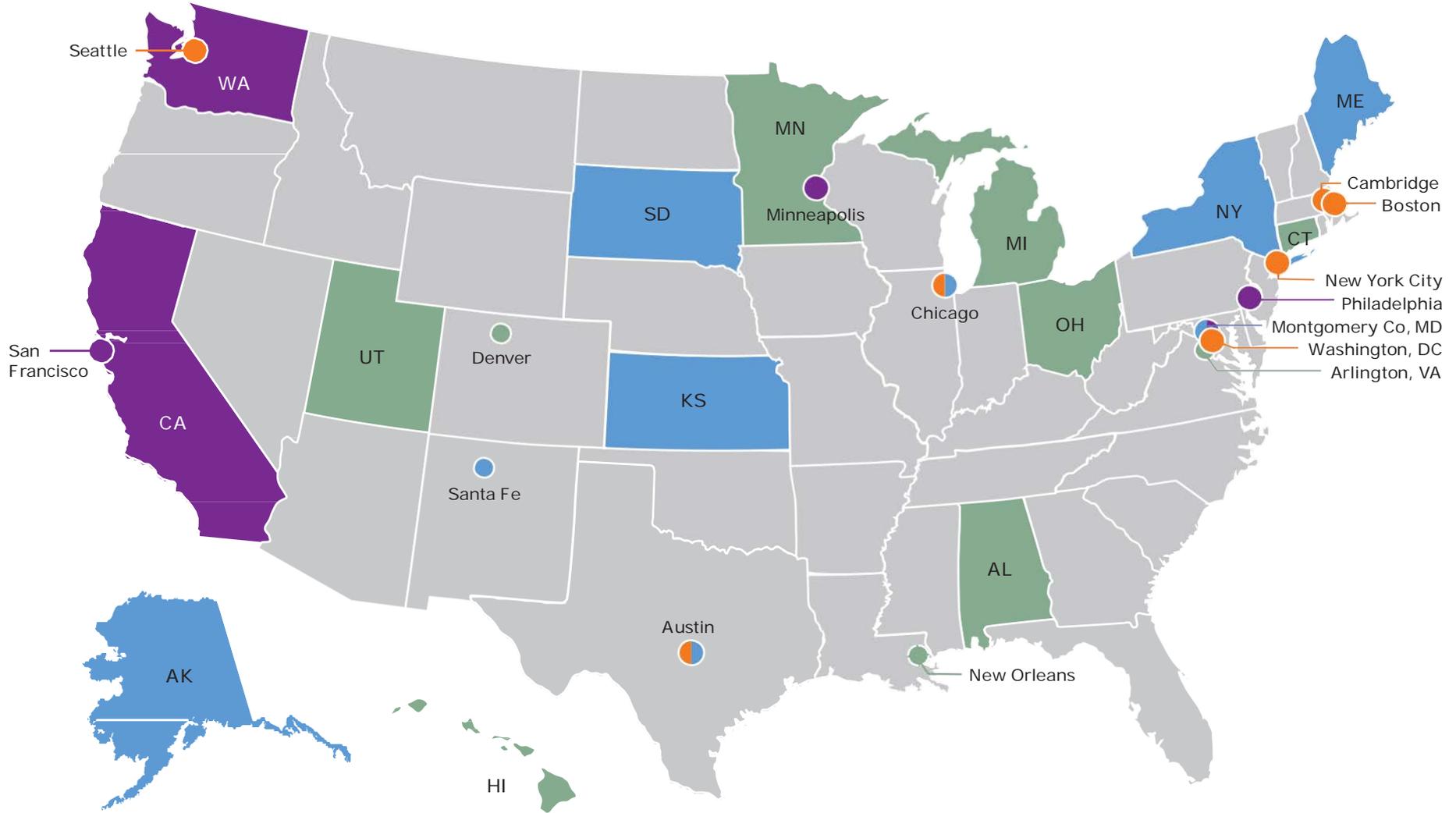
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Why not voluntary only?

- Mandatory policies impact 4-16x the amount of floor area compared to voluntary (ACEEE study)
- Widespread adoption is needed to meet the city's climate commitment

U.S. Building Benchmarking and Transparency Policies



- Commercial policy adopted
- Commercial & multifamily policy adopted
- Public buildings benchmarked
- Single-family transparency adopted



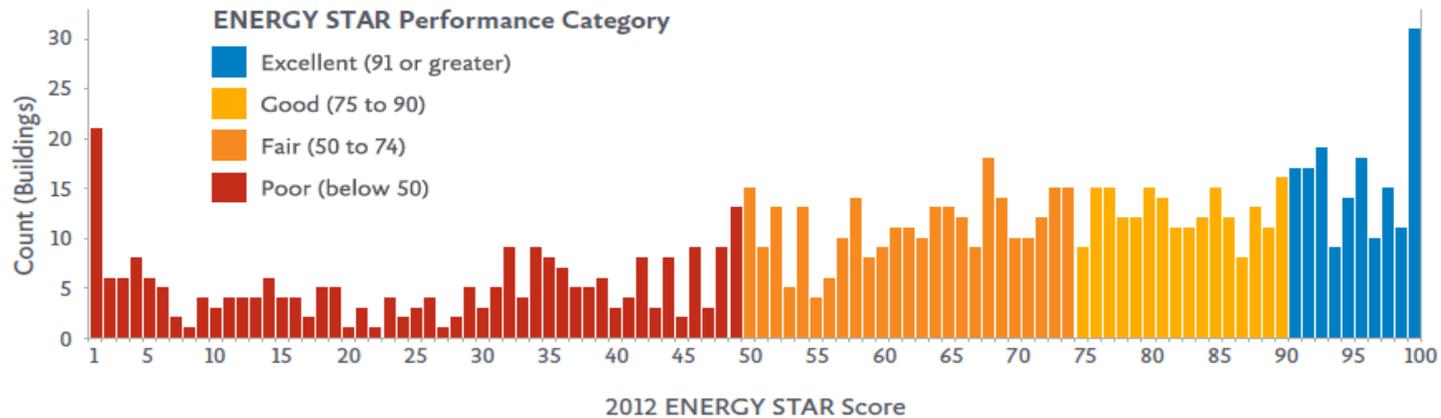
Objectives

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RAISE UP Low Performers

REWARD High Performers



- ✓ **Improve** the quality of Boulder's commercial building stock
- ✓ **Increase** awareness of efficiency opportunities and realize cost effective energy savings
- ✓ **Help** buildings owners understand and manage their buildings' energy use
- ✓ **Educate** tenants and other real estate professionals about building energy performance metrics
- ✓ **Collect** benchmarking data to inform future programs and services
- ✓ **Market** your building as energy efficient and high performing

Community Benefit

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WHO WILL THIS BENEFIT?

COMMUNITY
MEMBERS



Reduces overall GHG emissions

C&I BUILDING
TENANTS



Improves the quality of the building stock and reduces utility costs

C&I BUILDING
OWNERS



Improves the asset value of the building stock and reduces utility costs

C&I BUILDING
OWNERS



Recognizes high performing buildings and gives competitive advantage

Public Process/Community Engagement

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2010-2012

Peer networking, consultant studies

2012-2013

Rating & Reporting Pilot Program

Oct 2014 – Jan 2015

Working Group

Feb – Apr 2015

Business Group Outreach

Mar 18, 2015

Webinars for all affected building owners

& Early June 2015

+ Continuous engagement with the Environmental Advisory Board, other cities with similar policies, and federal agencies and nonprofits supporting these efforts.

BoulderBuildingPerformance.com





OPTIONS FOR PROPOSED REQUIREMENTS

Proposed Requirements

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KEY COMPONENTS OF ORDINANCE	PROPOSED OPTIONS
What would this ordinance require?	Commercial and industrial building owners (of a certain building square footage (sf)) would be required to rate and report the energy use of their buildings, and to take certain energy efficiency actions.

Proposed Compliance Timeline

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City Owned Buildings	Private Sector Commercial and Industrial Buildings (Bldgs)*		
>5,000 sf	Existing Bldgs > 50,000 sf New Bldgs** >10,000 sf	> 30,000 sf	> 20,000 sf
<p><u>2016</u>: Required rating and reporting (R&R) to the city begins. Data is publicly disclosed.</p> <p><u>2019</u>: Efficiency requirements take effect</p>	<p><u>2016</u>: Required R&R to the city begins.</p> <p><u>2019</u> Efficiency requirements take effect</p>	<p><u>2016-2017</u>: No requirements</p> <p><u>2018</u>: Required R&R to the city begins.</p> <p><u>2021</u> Efficiency requirements take effect</p>	<p><u>2016-2019</u>: No requirements</p> <p><u>2020</u>: Required R&R to the city begins.</p> <p><u>2023</u> Efficiency requirements take effect</p>
<p>* Includes industrial but excludes multi-family buildings.</p> <p>** Any building constructed since Jan 1, 2015 is considered "new"</p>			

Proposed Requirements

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KEY COMPONENTS OF ORDINANCE	PROPOSED OPTIONS
Disclosure: What metrics would be disclosed and to whom?	<p>Building owners would be required to disclose total energy use and other energy performance metrics to the city and to their tenants.</p> <p><u>Options for Public Disclosure:</u></p> <ul style="list-style-type: none"> Option 3A: Limited Public Disclosure (Compliance Status + Aggregate Energy Info) Option 3B: Public Disclosure to drive Market Transformation

Building Information				Building Performance								
Address	Property Floor Area (Buildings and Parking) (ft ²)			Electricity Use (kBtu)	Natural Gas Use (kBtu)	ENERGY STAR Score	Site EUI (kBtu/ft ²)	Source EUI (kBtu/ft ²)	Total GHG Emissions (MtCO ₂ e)			
1924 W Olney Ave.		(1st Quartile)	757,921	(2nd Quartile)	61,617,356	(3rd Quartile)	6,394,219	(4th Quartile)	99	849.5	2,469.2	7,995
9801 Frankford Avenue			62,000		162,661,197		8,811,112		93	757.4	2,210.1	21,832
3400 N. Broad Street			155,228		18,290,057		22,115,596		16	323.3	644.0	3,503
3440 N. Broad Street	K-12 School	43.5	≤ 36	37 - 43	17,966,207	44 - 55	40,195	≥ 56	46	323.2	514.7	6,436
3500 N Broad Street			485,000		16,699,836		71,788,580	Not Available		320.6	463.1	5,925
1121 W. MONTGOMERY AVE	Hotel/Motel	73.1	≤ 52	53 - 72	29,807,048	74 - 97	2,159	≥ 98	34	319.8	617.5	7,299
AVENUE	Supermarket/Grocery	215.4	≤ 202	203 - 215		216 - 269		≥ 270	17	46,280	59	
3307 N. Broad St.			169,976		15,246,713		7,864,771		25	308.6	749.6	2,348

Disclosure Spectrum

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City	Disclosure	Building Info	EUI	GHG	ENERGY STAR Rating	Water Data
Austin	Buyers (B), Tenants (T)		✓		✓	
Boston	Public	✓	✓	✓	✓	✓
Cambridge	Public	✓	✓	✓	✓	
Chicago	Public				✓	
District of Columbia	Public	✓	✓	✓	✓	
Minneapolis	Public	✓	✓	✓	✓	✓
NYC	Public	✓	✓	✓	✓	✓
Philadelphia	Public, B, Lenders & Leasers (L)	✓	✓		✓	
San Francisco	Public ¹ , B, T, L ²	✓	✓	✓	✓	✓
Seattle	B, T, L		✓		✓	

¹ Discloses summary of compliance, but not building energy use

² CA's statewide initiative, AB 1103, requires buildings to disclose energy performance at point of transaction

Proposed Requirements

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KEY COMPONENTS OF ORDINANCE	PROPOSED OPTIONS
Efficiency Requirements	<ul style="list-style-type: none">• Option 4A: Various Prescriptive Requirements• Option 4B: Energy Assessment with No Required Action• Option 4C: Energy Assessments with Limited Required Action (only lighting and retro-commissioning)• Option 4D: Energy Assessments with Required Action (custom to each building, based on what is deemed cost effective)• Option 4E: Whole Building Performance Standards



IMPLEMENTATION CONSIDERATIONS

Proposed Implementation Considerations

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IMPLEMENTATION CONSIDERATIONS	PROPOSED OPTIONS
Training and Support	<p>The city should provide:</p> <ul style="list-style-type: none">• A website with information and instructional guides,• A help-call center,• Green lease templates,• In-person and online training for the ENERGY STAR Portfolio Manager tool,• Continued support from EnergySmart advisors, and• Financial support for the Colorado Industrial Energy Challenge (CIEC) to provide assistance with goal setting and performance metrics to local industrial/manufacturing companies.

How will tenants be impacted?

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Rating & Reporting: Tenants will be required to give building owners access to their energy bills

Energy Assessments

- Access to spaces: The energy assessment will be partially conducted within tenant spaces and will require coordination.
- Costs: Tenants' energy bills will be reduced. Owners may pass through some of the costs of the energy assessment or required upgrades to the tenants.
- Coordination: Owners will be required to provide tenants with a copy of the energy assessment report and encouraged to coordinate energy upgrades through green leasing.

Required Efficiency

Some of the cost effective efficiency measures may fall under the tenant's jurisdiction (i.e. retail lighting or process loads). Depending on the option chosen for efficiency requirements, the City will work with tenants and owners to develop a process to address this.

Estimated Costs and Savings

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Requirements	Cost to Building Owner	Savings to Building Owner	Simple Payback
Rating and Reporting (annually)	Annually: \$500-\$2,400 per building OR 4-8 hours of in-house staff time <i>* free benchmarking assistance is available through Energy Smart advisors</i>	~2% savings each year in annual energy costs	< 1 year
Energy Assessments (every 10 years)	\$0.12-0.25/sf * <i>~0.2% of a building's annual operating expense</i>	\$0.02-0.04 /sf-yr (if efficiency is implemented)	Varies
Lighting Upgrades (every 10 years)	\$0.10-0.20 per sf	\$0.03-0.05/sf-yr	3-4 years
Retro-commissioning or Building Tune-Up (every 10 years)	Every 10 years: \$0.13-0.45/sf**	\$0.20-0.30/sf-yr	0.5 – 2.5 years

* The city will provide rebates for early adopters to help offset these costs.

**Xcel Energy offers rebates for retro-commissioning and building tune-ups for as much as 75% of the costs of the study, and up to 60% of the costs of the implementation.

Case Study: DC Office Building

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One Franklin Square
Washington, DC



- ❖ Owners thought the building was efficient....until they benchmarked
- ❖ First 3 years: reduced energy costs by 13% with no capital costs
- ❖ After realizing these savings, they pursued additional projects and saved even more
- ❖ Current ENERGY STAR score = 89

- Built in 1989
- 12 stories
- 590,000 sf
- Office and retail

Savings Up Close:

- Operational changes.

Project Cost	\$0
Annual Savings	2,100,000 kWh
Payback	Immediate

- Added variable frequency drives throughout building.

Project Cost	197,500 (spread over 9 years)
Annual Savings	\$92,500
Payback	< 2.5 years

- Installed LED lighting in garage.

Project Cost	\$50,400
Annual Savings	\$10,853
Payback	< 5 years



Potential Savings: Seattle

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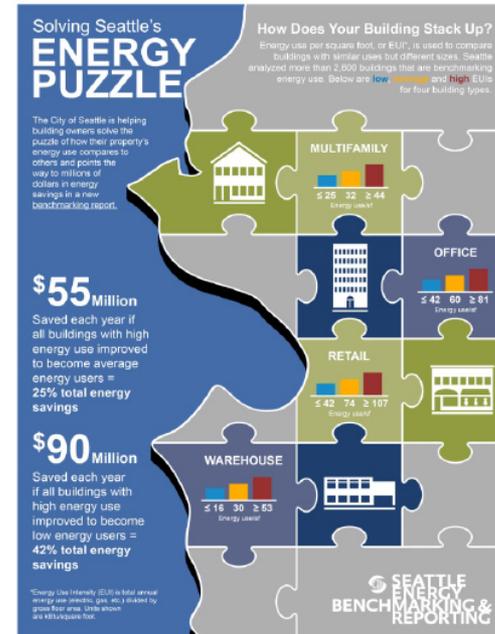


\$55 million

saved each year if all buildings with high energy use improved to become average energy users
= **25% total energy savings.**

\$90 million

saved each year if all buildings with high energy use improved to become low energy users
= **40% total energy savings.**



Initial Estimates: If Boulder brought all buildings up to be average energy users, total GHG emissions would be reduced by **~ 10%** and save **~\$24 Million/year.**



Potential GHG Reductions

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2005 GHG Emissions = 1.8 million metric tons CO₂ (MTCO₂)

Reductions needed for Climate Commitment = 1.44 million MTCO₂/yr

2012 GHG Emissions for private sector and city owned C&I buildings = 565,000 MTCO₂

	Estimated Annual GHG Savings (MTCO ₂ /yr)	Emissions Savings for Private Sector & City Owned C&I Buildings
Rating & Reporting	~33,000 – 38,000	~6-7%
Efficiency	30,000 – 125,000 (varies with options)	~5-22%
Total	33,000 – 163,000	6-29%

2-9% savings in total GHG Emissions



Proposed Timeline



Target Milestones

- Study Session:
May 12, 2015
- Ordinance Presented to Council:
Q3 2015
- Compliance Begins:
Q2 2016

	Phases
Oct 2014 – March 2015	Stakeholder Engagement/ Public Process
Dec 2014 – May 2015	Develop options and recommendations for a C&I Energy Efficiency Ordinance
Aug 2015 - 2016	<ul style="list-style-type: none"> • Communication/ Education Efforts • Develop systems & tools for implementation <ul style="list-style-type: none"> – A reference website for the ordinance – Implementation guides for owners and tenants – Educational and training opportunities – Incentives for early adopters – Administration and enforcement systems and procedure
Q2 2016	Targeted compliance deadline for the first buildings (e.g. city owned and C&I buildings > 50,000 sf)





DISCUSSION AND Q&A





SLIDES FOR REFERENCE

Boulder's Private Sector Commercial Buildings

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Size Category (SQFT)	Total SQFT	Number of Buildings	% of Total SQFT	% Total Number of Buildings
<1,000	17,077	22	0.1%	1.4%
1,000-4,999	1,094,660	371	3.4%	24.2%
5,000-9,999	2,268,112	318	7.0%	20.7%
10,000-19,999	5,276,787	375	16.3%	24.4%
20,000-29,999	4,088,380	166	12.6%	10.8%
30,000-39,999	2,986,804	87	9.2%	5.7%
40,000-49,999	2,210,437	50	6.8%	3.3%
50,000 and above	14,529,366	147	44.7%	9.6%
TOTAL	32,471,623	1,536		

Building Type	Bldgs (#)	Bldgs (%)	Rentable Area (SQFT)	Rentable Area (%)	Avg Bldg SQFT
Flex	161	10.5%	5,470,144	16.8%	33,976 sqft
Industrial	247	16.1%	6,053,035	18.6%	24,506 sqft
Commercial	1,128	73.4%	20,948,444	64.5%	18,571 sqft
Total	1,536		32,471,623		

Source: CoStar, 10/10/2014

Includes: Existing Properties Only

DOES NOT INCLUDE: Multi-Family



Case Study: Seattle Bank



Since 2008, Bank of America Fifth Avenue Plaza has lowered energy use by 15%, saving Hines nearly \$240,000 a year*.

The building has also earned:

- 11 years of ENERGY STAR certification
- LEED-EBOM Gold certification



“ Using ENERGY STAR Portfolio Manager is a great way to learn how your building’s energy performance compares to similar buildings, and can serve as a catalyst for making upgrades that improve efficiency and lower energy costs.

At Hines, we’re always looking for innovative ways to reduce our operating expenses. Lower operating costs are a benefit that can be passed onto tenants. ”

Anthony Brusco
Hines Engineering Manager



Energy Upgrades: Investment vs. Savings



Investment vs. actual and projected savings for 10 energy-efficiency measures implemented at the Bank of America building over the past 3 years.

* Utilized \$147,000 in rebates from Seattle City Light

Why Not Voluntary Only?

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Mandatory policies impact 4-16x the amount of floor area compared to voluntary

	Type	Program/Policy	Buildings included	Floor area included (mil sq ft)
Boston	Voluntary	Challenge for Sustainability (2009-2013)	97	27
	Mandatory	Building Energy Reporting and Disclosure Ordinance (2013)	1,600	250
Minneapolis	Voluntary	BOMA of Greater Minneapolis Kilowatt Crackdown (2012)	80	25
	Mandatory	Commercial Building Rating and Disclosure Ordinance (2013)	625	110
Seattle	Voluntary	Seattle Kilowatt Crackdown (2009)	53	18
	Mandatory	Council Bill 116731 (2010)	3,600	295



Adapted from analysis by:
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Enforcement



City	Fines (typically 30-45 days after written notice, if not addressed)	Compliance Rate (%)
Austin	Up to \$500 (Class C misdemeanor), \$2,000 (if criminal negligence)	76% for Tier 1
Boston	\$200 per day (>50,000 sf) \$75 per day (35,000-49,999 sf)	pending
Cambridge	\$300/day fine after 1st written warning	pending
Chicago	\$100 for the first violation \$25/day that the violation continues	pending
District of Columbia	\$100/day	83%
Minneapolis	Daily fine TBD, pursuant to Chapter 2 and the schedule of civil fines	pending
NYC	\$500 for 1 st violation \$500/quarter with a maximum of \$2,000 for continued violations.	75%
Philadelphia	\$300 fine for the 1st 30 days, and then \$100/day	90%
San Francisco	\$100 /day, up to a maximum of \$2,500 per violation (≥25,000 sf) \$50 /day, up to a maximum of \$1,500 per violation (<25,000 sf)	79%
Seattle	\$1,000/quarter, \$4,000 per year (≥50,000 SF or greater) \$500/quarter, \$2,000 per year (20,000 to 49,999 SF) +Disclosure Request violation: \$150 fine, \$500 fine for subsequent violations	93%



City	Building Size, Type
Austin	Commercial buildings >10 years old
Boston	All public, government, multifamily, and private non-residential buildings
Cambridge	Municipal buildings over 10,000 sf, Non-residential buildings over 25,000 sf
Chicago	Municipal and commercial buildings 50,000 – 250,000 sf Residential buildings 50,000 – 250,000 sf
District of Columbia	Public/Government Buildings \geq 10,000 sf Non-Residential and Multi-Family \geq 50,000 sf
Minneapolis	Public/gov't buildings \geq 25,000 sf Non-Residential Buildings \geq 50,000 sf
NYC	Public/Government Buildings \geq 10,000 sf Non-Residential and Multi-Family \geq 50,000 sf
Philadelphia	Public/Gov't, Non-Residential \geq 50,000 sf
San Francisco	All private sector nonresidential buildings \geq 10,000 sf
Seattle	Multifamily and non-residential buildings \geq 20,000 sf

City	Date Effective	Phasing/Timing based on Building Type & Size Thresholds
Austin	June 2011	Commercial buildings >10 years must report annually: June 2012: ≥75,000 sf (Tier 1) June 2013: ≥30,000 and <75,000 sf (Tier 2) June 2014: ≥10,000 and <30,000 sf (Tier 3)
Boston	May 2014	All public, government, multifamily, and private non-residential buildings: June 2013: ALL Public/Gov't Buildings Sept 2014: Non Residential ≥ 50,000 sf, May 2015: Multifamily ≥50 units or 50,000 sf May 2016: Non-Residential ≥ 35,000 sf, May 2017: Multifamily ≥35 units or 35,000 sf
Cambridge	Dec 2014	Oct 2014: Municipal buildings over 10,000 sf May 2015: Non-residential buildings over 50,000 sf and Multi-family residential buildings 50+units May 2016: Non-residential buildings over 25,000 sf
Chicago	June 2014	June 1, 2014: Municipal and commercial buildings ≥ 250,000 sf June 1, 2015: Municipal and commercial buildings 50,000 – 250,000 sf June 1, 2015: Residential buildings ≥ 250,000 sf June 1, 2016: Residential buildings 50,000 – 250,000 sf
District of Columbia	April 2013	Public/Government Buildings: April 2010: ≥10,000 sf Non-Residential and Multi-Family:: April 2013: ≥ 100,000 sf April 2014: ≥ 50,000 sf
Minneapolis	May 2014	Public/gov't buildings: May 2013: ≥ 25,000 sf Non-Residential Buildings: May 2014: ≥ 100,000 sf May 2015: ≥ 50,000 sf
NYC	August 2011	Public/Government Buildings: May 2010: ≥10,000 sf Non-Residential and Multi-Family:: May 2011: ≥ 50,000 sf
Philadelphia	Oct 2013	Public/Gov't, Non-Residential: June 2014: ≥ 50,000 sf
San Francisco	Oct 2011	All private sector nonresidential buildings: Oct 2011: ≥50,000 sf Apr 2012: ≥25,000 sf Apr 2013: ≥10,000 sf
Seattle	Oct 2011	Multifamily and non-residential buildings: April 2013: ≥20,000 sf

City	Enforcement - Fines (typically 30-45 days after written notice, if not addressed)	Compliance Rate (%)
Austin	Up to \$500 (Class C misdemeanor), \$2,000 (if criminal negligence)	76% for Tier 1
Boston	\$200 per day (>50,000 sf) \$75 per day (35,000-49,999 sf)	pending
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Seattle	\$1,000/quarter, \$4,000 per year (≥50,000 SF or greater) \$500/quarter, \$2,000 per year (20,000 to 49,999 SF) +Disclosure Request violation: \$150 fine, \$500 fine for subsequent violations	93% 33

City	Disclosed to?	Building Info	EUI	GHG	Other Disclosed Info
Austin	B, T, G				Energy rating calculation disclosed to relevant parties in real estate transactions.
Boston	P, G	✓	✓	✓	Energy Star rating, and where available, water consumption per square foot
Cambridge	P, G	✓			Will disclose info online, specifics tbd
Chicago	P, G				Energy consumption and performance scores
District of Columbia	P, G	✓	✓	✓	Property id, address, owner, property type, year built, Energy Star Score, floor area, electricity use, natural gas use, district steam use, other fuel use (based on actual data available on WDC website)
Minneapolis	P, G	✓	✓	✓	water use and energy performance score, where applicable,
NYC	P, G	✓	✓	✓	Weather normalized source EUI, Indoor water intensity, Energy Star Score, floor area
Philadelphia	P, G,B,L	✓	✓		
San Francisco	P ² , G, T, B, L ³	✓	✓	✓	Aggregate data disclosed only - weather normalized source EUI, Indoor water intensity, Energy Star Score, floor area
Seattle	B, G, T, L		✓		No public disclosure required., must report EUI and EnergySTAR scores to tenants, leasees, and potential buyers.

¹ P = public, G = government, B = buyers, T = tenants, L = leasers & lenders

² Discloses summary of compliance, but not building energy use

³ CA's statewide initiative, AB 1103, requires buildings to disclose energy performance at point of transaction

City	Efficiency Requirements	Efficiency Details
Austin	Audits & mandatory upgrades for multifamily buildings, voluntary actions for commercial	The Austin City Council has set the following voluntary goals based on EnergySTAR ratings: 75 or higher - No action necessary 63-74 - Raise the score to at least 75 42-62- Raise the score by 20% Below 42- Raise the score to 50
Boston	energy audits	Buildings registering poor energy, emissions, and water performance--and not demonstrating improvement--will be required to undertake energy assessments or audits every five years.
Cambridge	Referring to net zero task force and other resources	The City is considering options to require energy performance improvement actions of buildings that do not meet a minimum level of performance
NYC	ASHRAE level II audits & RCx, public building audits & upgrades	
San Francisco	Yes, ASHRAE level I or II audits every 5 years (with retroCx as an alternative)	Building owners must file a Confirmation of Energy Audit online. Audits must be completed by a qualified Energy Professional. Large facilities and buildings with complex systems are encouraged to consider retrocommissioning as an alternative to meet the audit requirement. Audits completed since 2008 may be used.
Seattle	No	Not required, but they do provide links to rebates and assistance available for energy efficiency (http://www.seattle.gov/environment/buildings-and-energy/energy-benchmarking-and-reporting/save-energy---save-energy)

Process for mixed-use buildings

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- Min. gross floor area (sf or %) that must be commercial
- EPA's Portfolio Manager guidelines
- ENERGY STAR rating requirements
 - >50% of gross floor area (GFA) must be one eligible space type
 - If >50% of a space is retail, not eligible
 - Cannot exceed 10% of total GFA for “other” category
 - Cannot exceed 10% of total GFA for multifamily housing





ENERGY STAR PORTFOLIO MANAGER AND DATA CHALLENGES



ENERGY STAR Portfolio Manager

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- EPA's FREE on-line energy and water use tracking tool
- Register to use the site
- Hierarchy of entries (one building or a portfolio)
- Input specific metrics, per building
 - Energy use data
 - Operational /occupancy details
- Generates a report with building metrics
- Generates a nationally-recognized (1-100) energy use score for eligible building uses/sizes
- A third party can enter or view (share) metrics



ENERGY STAR Portfolio Manager

Choose Account Name carefully - It can't be changed.

i.e., Business Legal Name [-City] if more than one in area.

energy efficient products | energy savings at home | energy efficient new homes | energy strategies for buildings & plants

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• ABOUT ENERGY STAR | • PARTNER RESOURCES

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join us | about us | press room | help desk | **portfolio manager login**

Owners and managers | Service providers | Program administrators | Tools and Resources | Training

Existing buildings | Commercial new construction | Industrial energy management | Small business

Use Portfolio Manager

You've heard it before: you can't manage what you don't measure. That's why EPA created ENERGY STAR Portfolio Manager®, an online tool you can use to measure and track energy and water consumption, as well as greenhouse gas emissions. Use it to benchmark the performance of one building or a whole portfolio of buildings, all in a secure online environment.

Not sure if Portfolio Manager is for you? It is!

You can use Portfolio Manager to manage the energy and water use of any building. Seriously. Any building. K-12 school? Check. Office building? Check. Stadium? Check. We could keep going. All you need are your energy bills and some basic information about your building to get started.

Are you designing a new building? You can also use Portfolio Manager to see how your design project stacks up against similar existing buildings nationwide. Enter the energy modeling results for your whole building's expected energy performance to see national context for your percent-better-than-code design.

Join the rest of the industry.

When you add your buildings, you'll be joining 40 percent of U.S. commercial building space that's already benchmarked in Portfolio Manager – making it the industry-leading benchmarking tool. You'll also be joining 35 percent of the Fortune 500®, half of the largest U.S. healthcare organizations, major league sports teams, colleges and universities, and entire cities.

It's only growing.

And it's on the move. Portfolio Manager is the tool of choice among cities such as New York, Seattle, and Boston that have passed mandatory benchmarking laws. Not only that, but Portfolio Manager is used by the Canadian Government as the platform for their national energy benchmarking program for existing commercial and institutional buildings.

VOTE on Portfolio Manager Enhancements!

Urgent! Important Nice to have Low priority

SIGN UP

Current Portfolio Manager Users

username

password

Forgot password? **LOG IN**



Data Points

Investing in Better Buildings



- Basic
- Characteristics of each space (vary by use)
- Utility Bill Data (12 months minimum)



PUBLIC SERVICE COMPANY OF COLORADO
 P O BOX 840
 DENVER, CO. 80201
 (800) 895-4999 Español: (800) 687-8778

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Customer Name	Service Address	Account No.	Date Due Jun 30, 2011	Amount Due \$147.40
Account Activity				
Date of Bill	Jun 15, 2011	Previous Balance		\$129.18
Number of Payments Received	1	Total Payments		<u>(\$129.18)</u>
Number of Days in Billing Period	32	Balance Forward		\$0.00
Statement Number		+ Current Bill		<u>\$147.40</u>
Premise Number		Current Balance		\$147.40
Electric Service - Account Summary				
Invoice Number		Residential General		
Meter No		Non-Summer	489.94 kWh x 0.046040	\$22.56
Rate	R	Residential General	Summer Tier 1*	\$10.07
Days in Bill Period	32		Summer Tier 2*	\$14.61
			162.31 kWh x 0.090000	



ESPM Data Inputs Per Building

Three ways to input data

1. Manual entry for one building
2. Spreadsheet upload (multiple properties possible)
3. Web Services – exchanges data with ESPM

Free PACE
Assistance Available



ESPM Challenges

Investing in Better Buildings



- Energy use data can be cumbersome to obtain
- Utility metering complexities
- Not all buildings can get a 1-100 rating or score



Whole-Building Data Access

Investing in Better Buildings



- Regulated Colorado utilities subject to data access and privacy rules
- Boulder's rating + reporting pilot found it challenging to obtain data
- Xcel Energy participating in DOE Better Buildings



Commercial Building Energy Rating + Reporting Pilot Program

Investing in Better Buildings



Attachment A

City of Boulder



Commercial Building Energy Rating & Reporting Pilot Program Report

Prepared by McKinstry



BOULDER, COLORADO
26 FEBRUARY 2013



Consultant's Recommendations:

- ✓ Support a voluntary rating + reporting program
- ✓ Investigate better ways to access whole building energy data
- ✓ Provide education and training
- ✓ Investigate installing sub-meters and potentially offsetting some of the cost of purchase and installation
- ✓ Target larger buildings (45% of the commercial sf is found in buildings >50,000 sf)
- ✓ Consider implementing prescriptive energy standards
- ✓ Continue to work with both building owners and tenants (partnering with programs such as *EnergySmart*) to gather energy data and develop new incentive or regulatory programs

C&I Rating +Reporting Ordinances

Investing in Better Buildings



City	Effective Date	Gov't/ Private Sector	Disclosure	Energy Efficiency?
Austin	June 2011	10K SF+	Buyers (B), Tenants (T)	Assessments
Boston	May 2014	All/35K SF+	Public	Assessments
Cambridge	Dec 2014	25K SF+	Public	---
Chicago	June 2014	50K SF+	Public	---
District of Columbia	April 2013	10K/ 50K SF+	Public	---
Minneapolis	May 2014	25K/ 50K SF+	Public	---
NYC	Aug 2011	10K/ 50K SF+	Public	Assessments, RetroCx, Lighting, Sub-metering
Philadelphia	Oct 2013	50K SF+	Public, B, Lenders & Leasers (L)	---
San Francisco	Oct 2011	10K SF+	Public ¹ , B, T, L ²	Assessments, RetroCx
Seattle	Oct 2011	10K SF+	B, T, L	---

¹ Discloses summary of compliance, but not building energy use

² CA's statewide initiative, AB 1103, requires buildings to disclose energy performance at point of transaction