Seattle Energy Use Benchmarking

Your Quick Guide to Compliance
(and how to get something out of it)

Agenda

- Introduction

- The case for benchmarking energy

- What's in it for you?
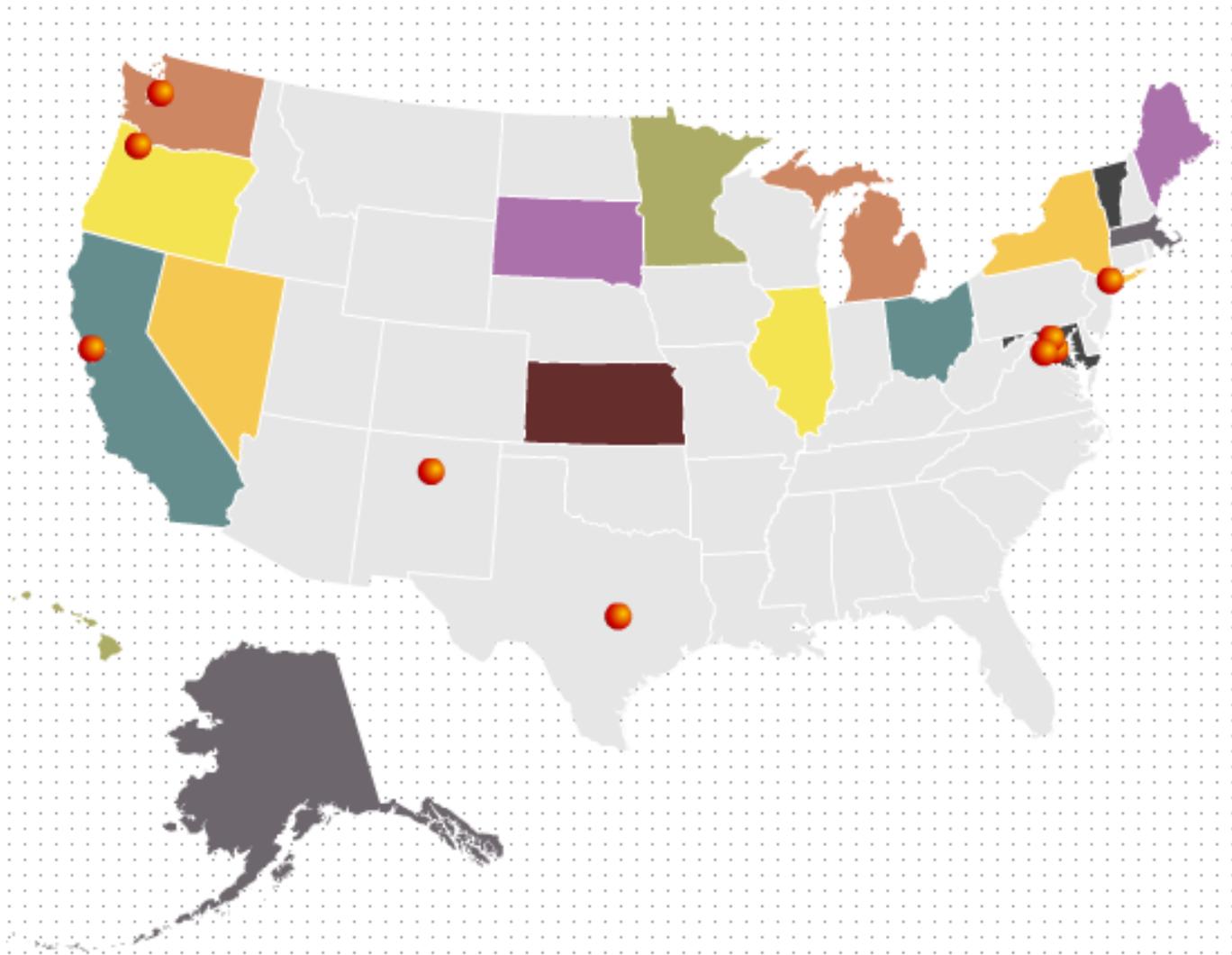
- Seattle 22.920 details

- How to get it done

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Thank You Seattle!

City of Seattle
Office of the Mayor
Office of Sustainability & Environment
Department of Planning & Development

SEATTLE 2030 DISTRICT

PSE PUGET SOUND ENERGY

Seattle City Light
Lighting Seattle since 1905

city green building

NEEC
NORTHWEST ENERGY
EFFICIENCY COUNCIL

SEATTLE STEAM CO.
Sustainably Reliable

ENERGYPRINT

Leading, Listening and Learning

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Make the Best of Regulation

- The decision has been made

- You must comply

- Take advantage of the opportunity!

GET YOUR GREEN ON

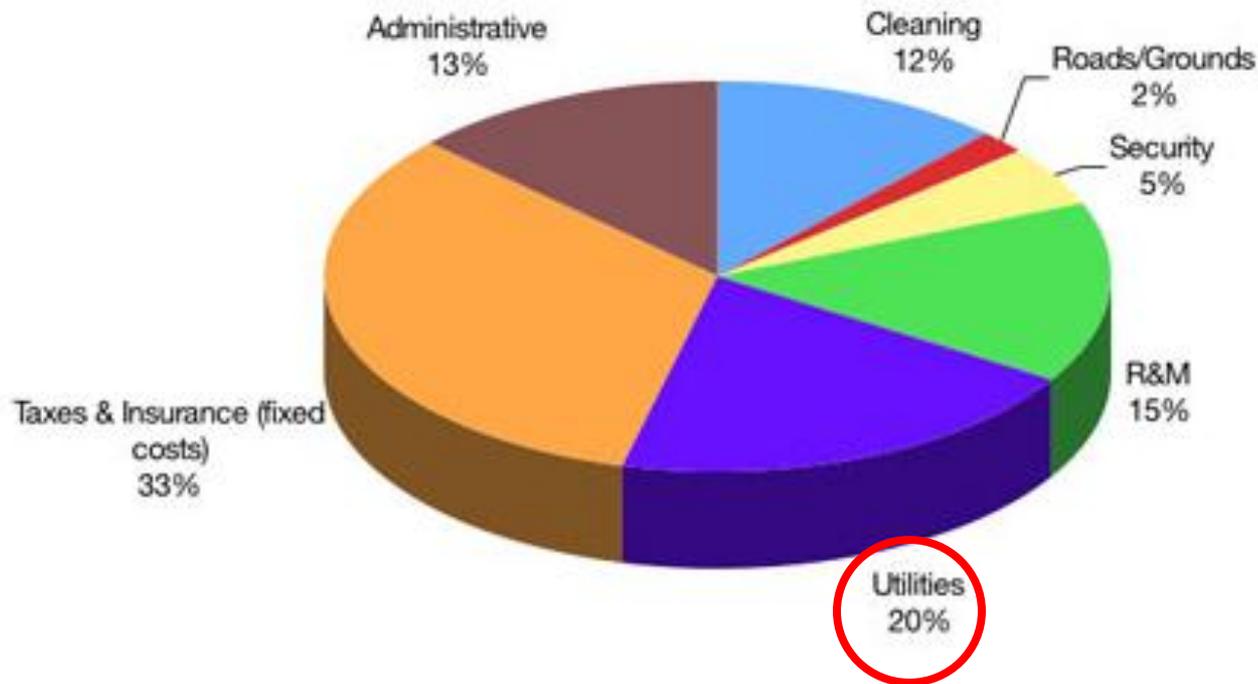**Seattle Building Energy Rating & Reporting Ordinance**
Legislation aimed to inform, educate and improve the energy performance of existing buildings

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Why benchmark energy?

Typical Office Operational Costs

- Utilities are typically in the top 3

Non-Residential Operating Cost Index

- Energy is fastest growing Op Ex

Non-Residential Operation Cost Index				Year Over Year Change:	
December 2003 = 100	May. 2011	Apr. 2010	Percent Change	May. 2010	Percent Change
Non-Residential Facility Operations	126.3	125.8	0.4%	120.9	4.5%
Index Components*					
Custodial	111.6	111.5	0.1%	110.6	0.9%
Energy	143.0	140.0	0.0%	132.8	7.7%
Real Estate Management	107.7	106.7	0.9%	106.9	0.7%
Security	108.7	108.7	0.0%	108.4	0.3%
Telecommunications	101.5	101.0	0.5%	100.8	0.7%
Other Indexes					
CPI-Urban Consumers, All Items	122.6	122.0	0.5%	118.4	3.6%

*Five heavily weighted index components are shown.
Sources: U.S. Department of Commerce, U.S. Department of Labor, and Whitestone Research.

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Cost Savings Potential

- According to ENERGY STAR, businesses typically spend 30% more than needed on energy

	Building Total Square Feet			
Cost/Sq Ft	25,000	50,000	100,000	250,000
$ 2.33	$ 58,250.00	$ 116,500.00	$ 233,000.00	$ 582,500.00
$ 1.63	$ 40,750.00	$ 81,500.00	$ 163,000.00	$ 407,500.00
SAVINGS POTENTIAL	$ 17,500.00	$ 35,000.00	$ 70,000.00	$ 175,000.00

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What's in it for you?

Why Benchmark Energy?

- Triple Bottom Line – You choose why

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Benefits - Profit

- OP/EX
  - Increase NOI
  - Increase NAV

- CAP/EX
  - Increase ROI

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Increase NOI (Net Operating Income)

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Cost per square foot
Previous 12 Months: $3.19
Current 12 Months: $2.02

Total cost
Previous 12 Months: $301,569.65
Current 12 Months: $191,128.28

Properties   Videos   Reports   Resources

Number of Properties 1   Square Footage 94,459
Eligible Properties 1   Eligible Sq Ft 94,459

⚠ Alerts Pending

Cost | Consumption | Carbon

$2.01 | 72.22 kBtu | 30.62 lbs.
PREVIOUS 12 MO. $3.08 | PREVIOUS 12 MO. 102.79 kBtu | PREVIOUS 12 MO. 45.73 lbs.

Property Snapshot

Energy Type: All

UNITS	PREVIOUS 12 MO	CURRENT 12 MO	% CHANGE
Cost/sq. ft	$3.19	$2.02	-36.6% ⬇
kBtu/sq. ft	106	72	-31.7% ⬇
lbs CO$_2$/sq. ft	47.18	30.70	-34.9% ⬇

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Increase NAV – (Net Asset Value)

	Current	10% Energy Reduction
Energy Exp / sq ft	$ 2.00	$ 1.90
Total Energy Expense	$ 100,000	$ 90,000
NOI Increase		**$ 10,000**
NAV Boost		**$ 125,000**

Building Size – 50,000 sq ft.
Energy Reduction -10%
Cap Rate 8%

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Increase ROI - Actionable Insights

- Automatic notification of energy anomalies

Increase ROI - Prioritize

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| Dashboard | Portfolios | **Properties** | | Videos |

Properties

Viewing [My Properties ▼] by: [PROPERTY SNAPSHOT] [WEATHER SNAPSHOT] [PROPERTY INFO]

Property Name ▼	⚠ ▼	COST/SQ.FT. ▼	COST % CHANGE ▼	KBTU/SQ.FT ▼	KBTU % CHANGE ▲
Building B	⚠	$2.65	11.3% ↑	238	23.4% ↑
Building J	⚠	$2.26	9.3% ↑	123	22.1% ↑
Building C		$2.83	10.9% ↑	180	12.3% ↑
Building I		$2.67	-0.2% ↓	178	-1.2% ↓
Building E		$1.42	1.9% ↑	84	-3.0% ↓
Building X		$1.33	-0.2% ↓	77	-3.2% ↓
Building G		$1.53	-5.0% ↓	79	-7.0% ↓

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Increase ROI – Measure impact

	Billed		Weather Normalized	
	Total bldg	Per sq ft	Total bldg	Per sq ft
Cost Avoidance	$181,533	$1.92	$154,361	$1.63
Kwh Avoidance	1,799,585	19	1,506,571	16

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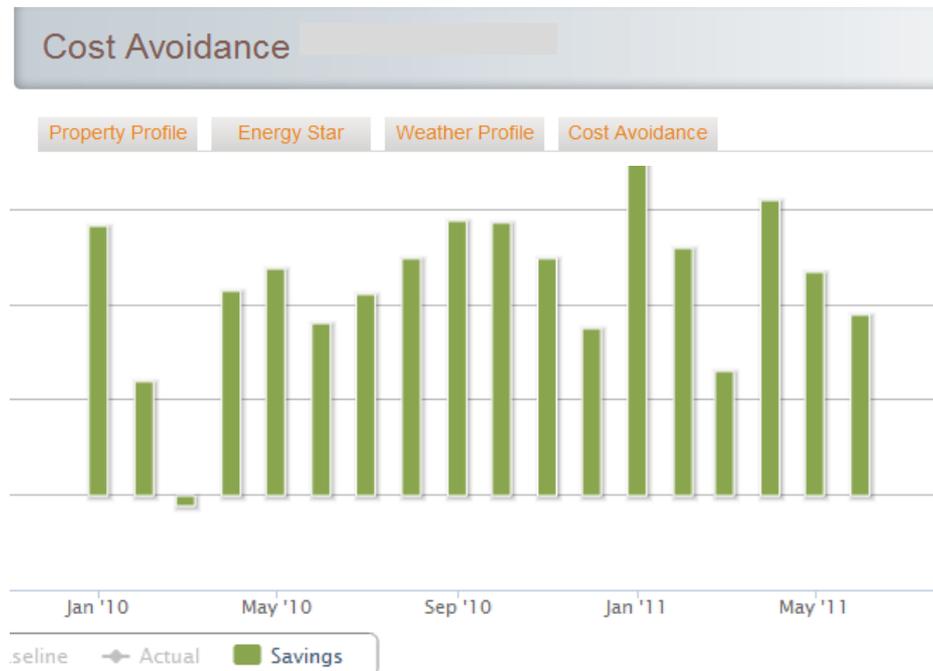
People; Planet

City of Seattle Objectives

- Increase access to comparative energy consumption in buildings

- Encourage the market to drive energy efficiency investments

- Reduce energy use from existing buildings by 20% by 2020

- Reduce greenhouse gas emissions by 80% by 2050

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Seattle 22.920/CB116731 Energy Benchmarking Ordinance

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Director's Rule

- 52+ pages – all you need to know??

DPD | **Director's Rule 6-2011**

Applicant:		Page	Supersedes:
City of Seattle Department of Planning and Development		Publication:	Effective: 5/3/2011
Subject:		Code and Section Reference: Seattle Municipal Code 22.920 Energy Use Benchmarking	
	Implementation of Energy Performance Benchmarking	Type of Rule: Code Interpretation	

Seattle 22.920 Components

Benchmarking

- Establish a baseline of energy performance

- Guide energy efficiency investments

"Like bldg" benchmark (control)

Before improvement (performing similar to peer group)

After improvement (significant benefit versus "control")

Property Trends COST/SQ. F

kBtu per square foot (Gas)   TYPE: ○ All Energy ● Gas ○ Electric   Annualize data: ☑

April, 2010

School A   Peer group

A. Grant 123 - New Boiler
2009-3-1

2007   2008   2009
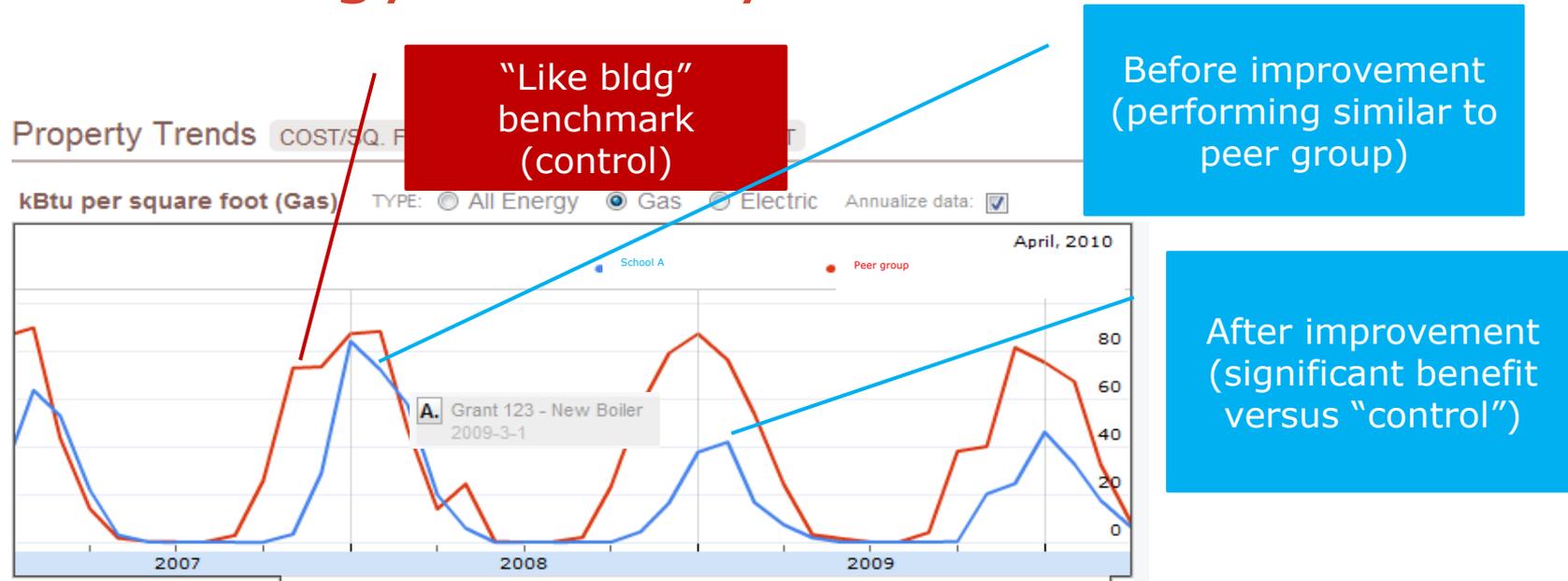
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Disclosure

- Release energy performance information to tenants, buyer, or lender

STATEMENT OF ENERGY PERFORMANCE

Building ID: 2670811
For 12-month Period Ending: December 31, 2010[1]
Date SEP becomes ineligible: N/A

Date SEP Generated: Sep

Facility

Facility Owner
N/A

Primary Contact for this
N/A

Year Built: 1931
Gross Floor Area (ft²): 151,000

Energy Performance Rating[2] (1-100) N/A

Site Energy Use Summary[3]
District Steam (kBtu)   11,463,187
Electricity - Grid Purchase(kBtu)   5,150,557
Natural Gas (kBtu)[4]   344,582

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Seattle 22.920 (cont.)

Reporting – City of Seattle

- Monitor progress toward achieving citywide energy efficiency targets

- Identify market sectors with greatest need and opportunities

- Guide development of future policies and incentive programs

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22.920 – Who is Eligible and When

	October 3, 2011 (6 month grace period from April 1, 2011)	April 1, 2012
Non-Residential Buildings		
>50,000 sq ft	★	★
>10,000 sq ft		★
Mixed Use Buildings >50,000 sq ft (Four or less dwelling units)	★	★
Mixed Use Buildings >10,000 sq ft (Five or more dwelling units)		★
Multifamily Buildings (Five or more dwelling units)		★

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*Ordinance allows utilities up to 60 days to load energy data to ENERGY STAR

Again – compliance is required

city green building

City of Seattle
Department of Planning
& Development

Penalties for Non-Compliance

- Failure to submit an accurate report
  - First violation: $150 citation
  - 15 days after citation: $150 per day for the first 10 days of noncompliance, then $500 per day for each subsequent day in violation
- Failure to disclose performance upon request
  - First violation: $150 citation
  - Subsequent violations: $500 citation

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How to get it done

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Sample checklist – one of many

COMPLIANCE CHECKLIST

Seattle Building Energy Rating & Reporting Ordinance

Two pathways
- Setting up a new building record
- Working with an existing record

Building Data
- ☐ Review and confirm building info
- ☐ Set up Portfolio Manager (PM) account
- ☐ Create PM record for building
- ☐ Enter building profile info

If you have already been benchmarking your buildings, are consistent with the Director's Rule requirements for whole building energy reporting, and will continue to manually enter energy meter data, you are done!

— *or* —

- ☐ Select utilities as service providers
- ☐ Follow utility specific instructions to request automated utility data upload
- ☐ Confirm that all meters have been identified
- ☐ Confirm consumption data has been uploaded
- ☐ Create an energy performance report

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city green building
Seattle Department of Planning & Development

The big picture

Meter 1
Meter 2
Meter 3

Provided by Utilities
(Authorized by Bldg Owners)

Provided by
Bldg Owners

Building Profile
Data

Developed by
Seattle DPD

Buildings
Database

Portfolio Manager
Secure Server

BENCHMARKING

Building
Owner

Data
Download

City of Seattle

REPORTING
(Annually)

Buyer, Tenant
or Lender

DISCLOSURE
(Upon Request)

Your piece of the process

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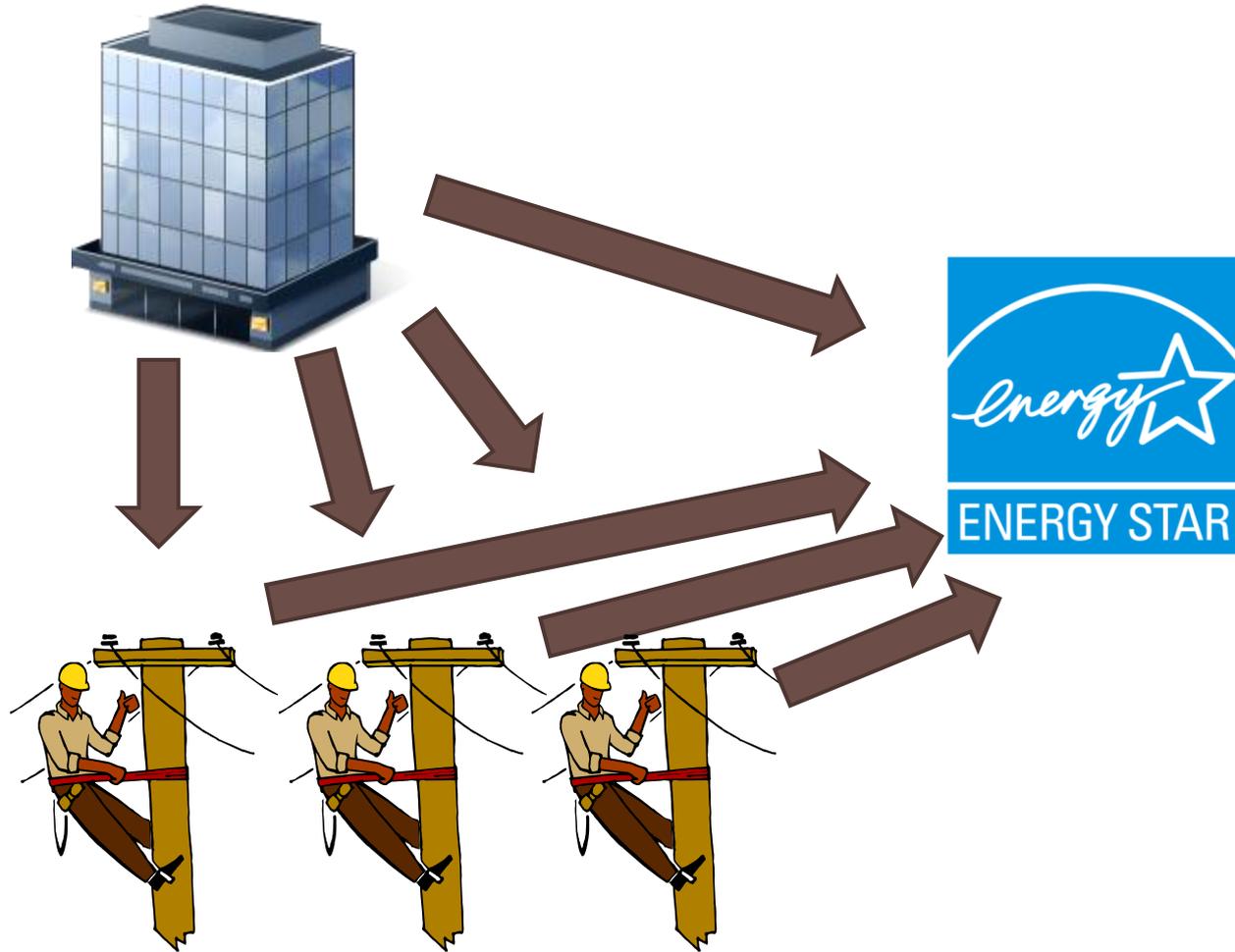
Utility release forms

**Separately metered tenants may be required to complete authorizations or provide acct information

Portfolio Manager Account

- It all ends up here – at EPA's ENERGY STAR Portfolio Manager

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Benchmarking alternatives

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Options – go in with your eyes open

Do-it-Yourself

Mechanical / Energy Contractor

Benchmarking Solution

INTRODUCING ENERGYPRINT®
A simple way to make energy use visible.

Your Rank
4.1 CURRENT 12 MO
8.6 IMPROVEMENT RANK

Property Map

EXPLORE THE FEATURES:
ENERGY DASHBOARD
ENERGY BENCHMARKING

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DIY - Benchmarking in ENERGY STAR

- Base required for compliance

- Static benchmarking comparisons

- Data frequency may be quarterly and up to 60 days in arrears

- Based on "complete" building data – without separation of tenant /owner paid

- Not all building use types are eligible to receive ENERGY STAR score

- Extensive learning curve required

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EnergyPrint process

- EnergyPrint facilitates data collection, submission and compliance

- Within weeks, you will have actionable history and on going monitoring to impact your bottom line
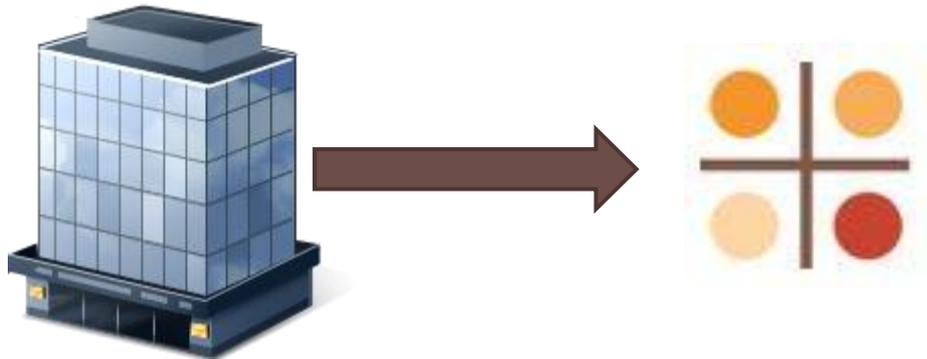
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EnergyPrint Solution

Beyond compliance –

Ask and answer key energy questions – *in business language*

- How are we doing?

- Are we getting better or worse?

- Where are the opportunities for improvement?

- Are improvement projects working?

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Getting started

Getting started – DIY

1. Go to www.seattle.gov

2. Review guidelines

3. Learn ENERGY STAR Portfolio Manager

4. Begin data collection (all payees and space types)

5. Set-up Energy Star

6. Authorize utilities

7. Authorize Seattle DPD

8. Review and approve information

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Get started with EnergyPrint

1. Fill out subscription order form

2. We'll get started and work with you to get it done...it's fast, simple and useful

Make the Best of Regulation

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GET YOUR GREEN ON

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Legislation aimed to inform, educate and improve the energy performance of existing buildings

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Contact

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