

Promoting Energy Efficient Behaviors through Energy Benchmarking Ordinances

BECC 2013

Nicole Ballinger

City of Seattle Office of Sustainability & Environment

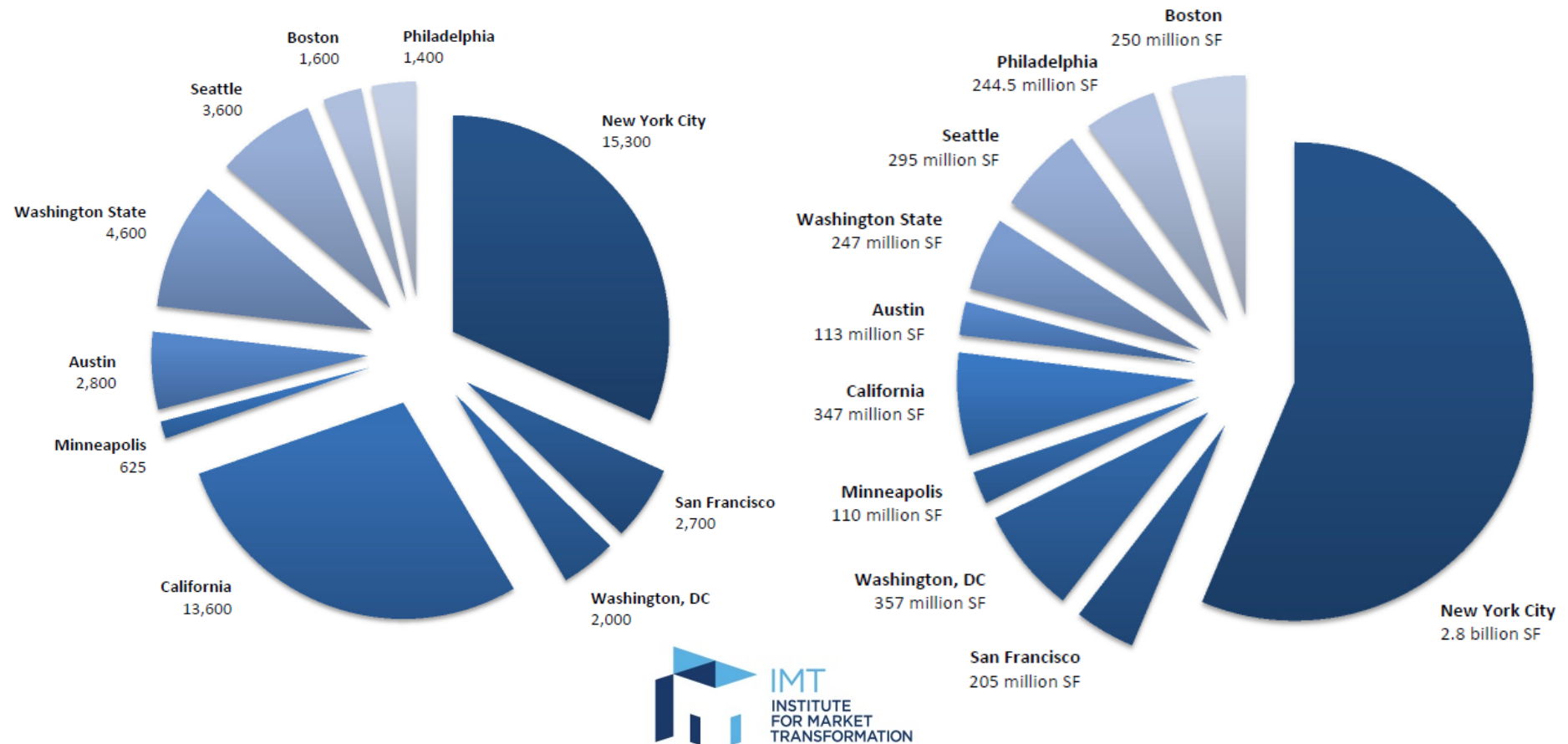


- ❑ **Benchmark** Energy Use (all sources to building) with EPA's Portfolio Manager
- ❑ **Annually Report** Whole-Building Energy Use (EUI and/or ENERGY STAR score +)
- ❑ **Disclose** (Public or Private)



ENERGY STAR®
PortfolioManager®

48,000 Properties, 4.9 Billion SF Each Year!



Thousands of people that now must track energy use...

Most of whom are new to benchmarking and the data.



Property Owner
(Legally
Responsible)

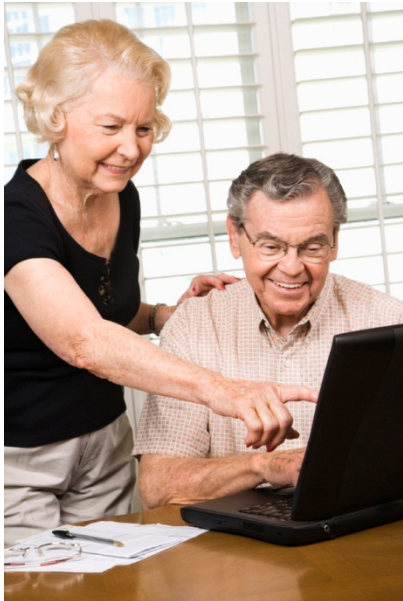


Property or Facility
Manager (May do the
Benchmarking)



Vendor (Wants to be hired
to do Benchmarking)

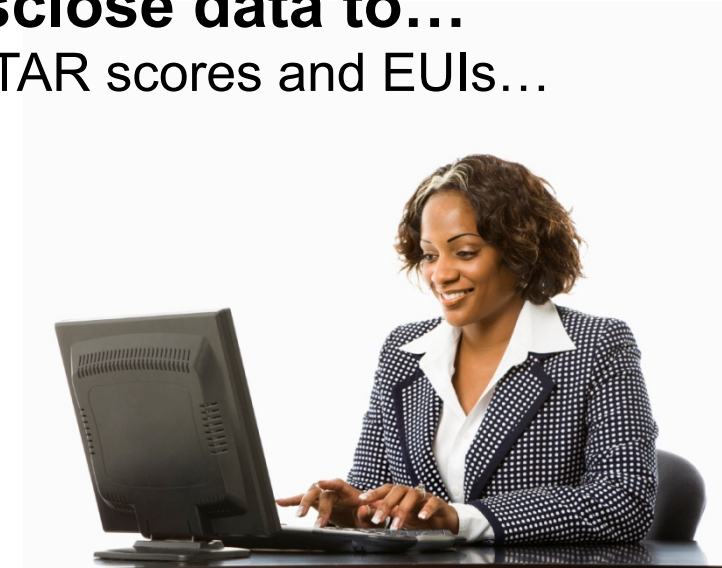
Millions more people to disclose data to...
Most of whom are new to ENERGY STAR scores and EUIs...



Multifamily
Apartment Tenants



Business
Owner / CEO
Leases
Building



Lender / Financer



Buyers,
Investors,
REITS

Seattle Requirements

- ❑ Non-Residential & Multifamily
20,000 SF or Greater

- ❑ About 3,500 Buildings
(283 million SF)

- ❑ Reports for Previous Year Due
by April 1st
 - ❑ 50,000 SF+ - 2011 data
 - ❑ 20,000 SF+ - 2012 data
& Annually thereafter

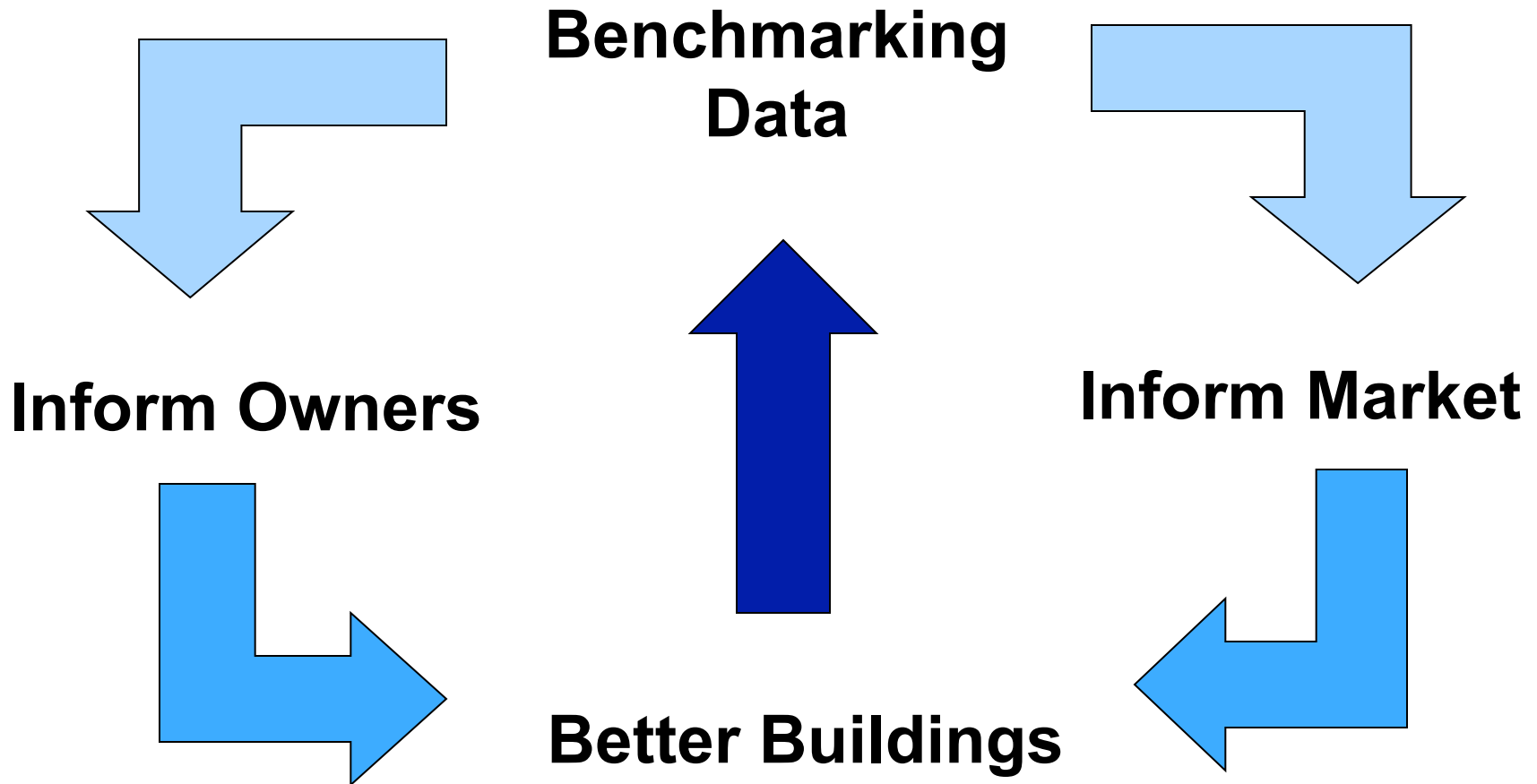


Seattle Compliance

Building Type & Size	1st Reporting Deadline	Compliance Rate*
Non-Residential ≥ 50,000 SF	April 1, 2012 2011 data	88% 129.3 million sf
Multifamily ≥ 50,000 SF	October 1, 2012 2011 data	96% 76.4 million sf
Non-Res & Multifamily ≥ 20,000 SF	April 1, 2013 2012 data	88% 255.4 million sf

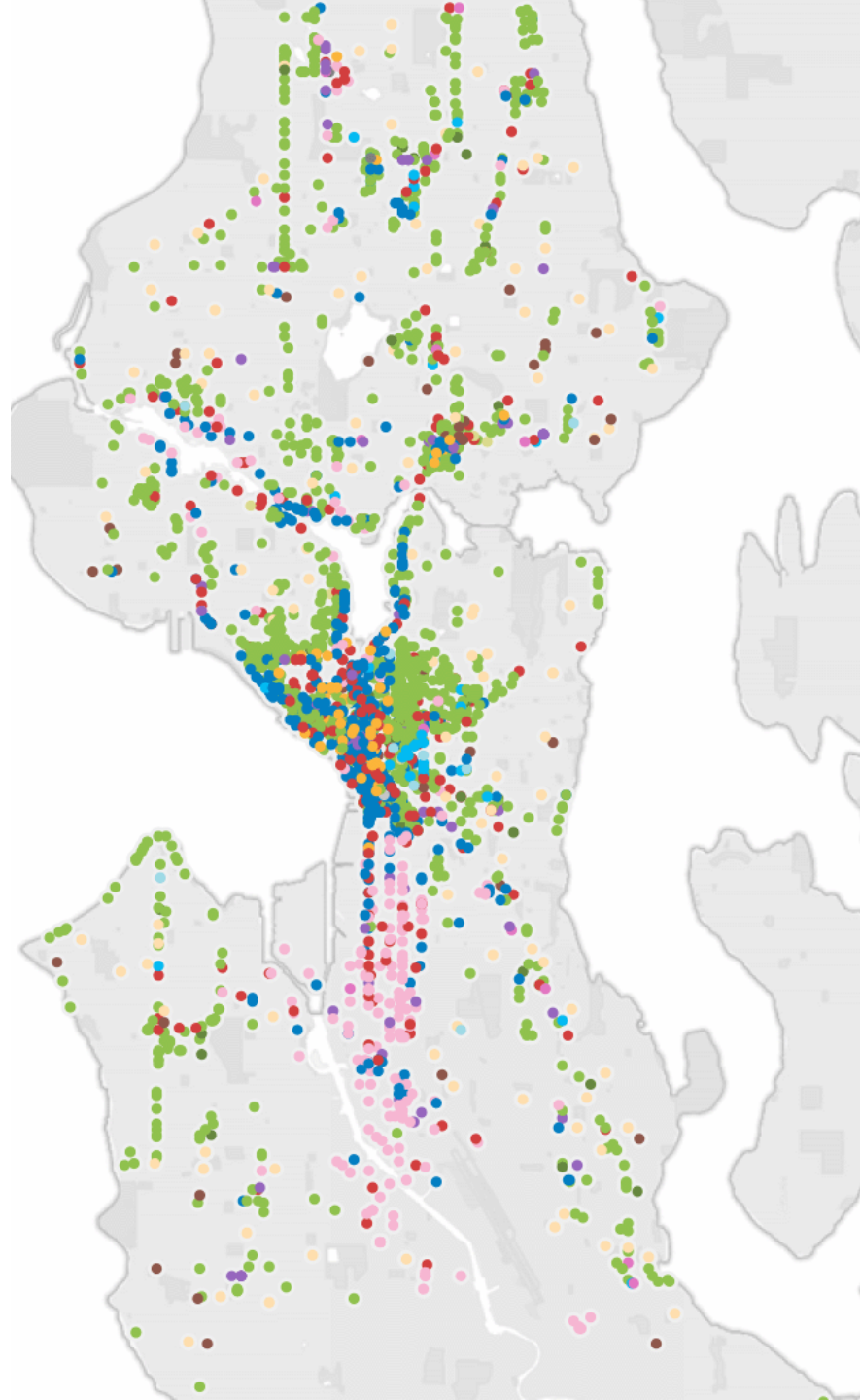
*As of Nov 15, 2013

Next Steps



2012 Benchmarked Buildings

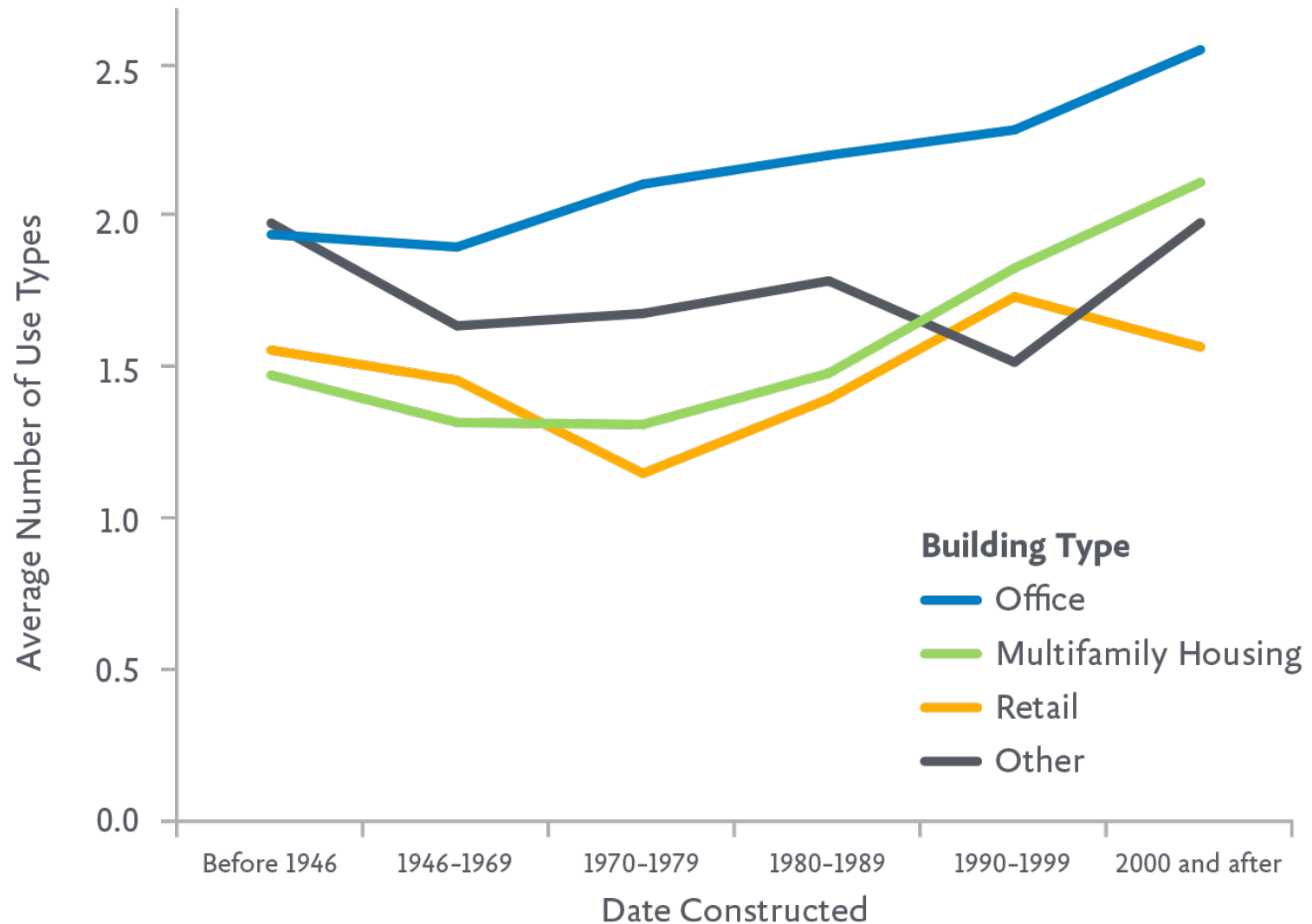
- Courthouse
- Hospital (General Mex
- Hotel/Motel
- House of Worship
- K-12 School
- Medical Office
- Multifamily Housing
- Office
- Other
- Residence Hall/Dormi
- Retail
- Senior Care Facility
- Supermarket/Grocery
- Warehouse



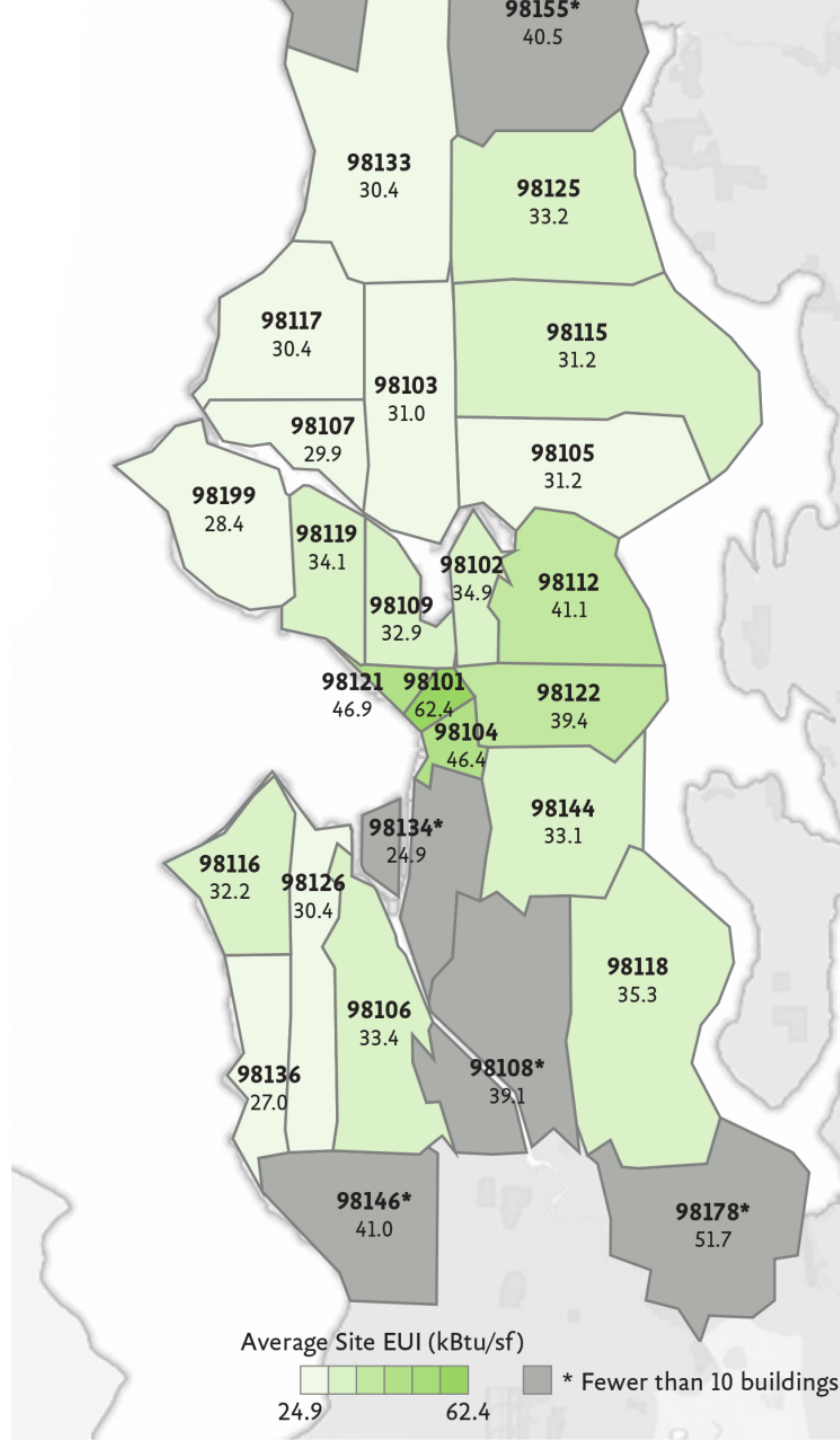
Use by Building Type

Type of Building	2012 Annual Energy Use Intensity (Site EUI in kBtu/sf)					Number of Buildings*	Year Built (median)	Size (median sf)	EPA ENERGY STAR (median)
	Median	Lowest Use (1st Quartile)	Medium-Low (2nd Quartile)	Medium-High	Highest Use				
Multifamily Housing	31.9	≤25	26-32	33-43	≥44	1309	1981	39,212	NA
Office	59.8	≤42	43-60	61-80	≥81	419	1972	64,858	75
Other	61.7	≤33	34-62	63-115	≥116	240	1960	40,854	69
Warehouse	30.4	≤16	17-30	31-52	≥53	228	1962	43,080	56
K-12 School	43.5	≤36	37-43	44-55	≥56	114	1962	55,427	72
Retail	74.1	≤42	43-74	75-106	≥107	94	1967	53,500	68
Hotel/Motel	73.1	≤53	53-73	74-97	≥98	52	1988	107,117	68
House of Worship	42.0	≤26	27-42	43-54	≥55	45	1952	26,374	63
Medical Office	82.9	≤62	63-83	84-112	≥113	41	1984	66,588	47
Senior Care Facility	65.6	≤48	48-66	67-104	≥105	29	1995	94,370	51
Supermarket	215.4	≤202	203-215	216-269	≥270	17	1996	46,280	59
Residence Hall	47.3	≤33	34-47	48-82	≥83	11	1960	34,560	77
Hospital	166.5	≤122	123-167	168-206	≥207	9	1961	879,000	67

Number of Use Types & EUI



2012 Multifamily Median Site EUI



Seattle Apartment & Condo Building Energy Performance

The numbers on the scale show the annual energy use intensity (kbtu/sf) ranges found in Seattle multifamily buildings (2012).



Your building's score

41

This scale is based in performance by quartile. The 1st quartile in red (highest use) represents the range of EUIs among the 25% of buildings with the highest EUIs. The 2nd quartile in orange represents the range of EUIs for the next 25% of buildings with respect to EUI, and so on.

Solving Seattle's ENERGY PUZZLE

The City of Seattle is helping building owners solve the puzzle of how their property's energy use compares to others and points the way to millions of dollars in energy savings in a new [benchmarking report](#).

\$55 Million

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

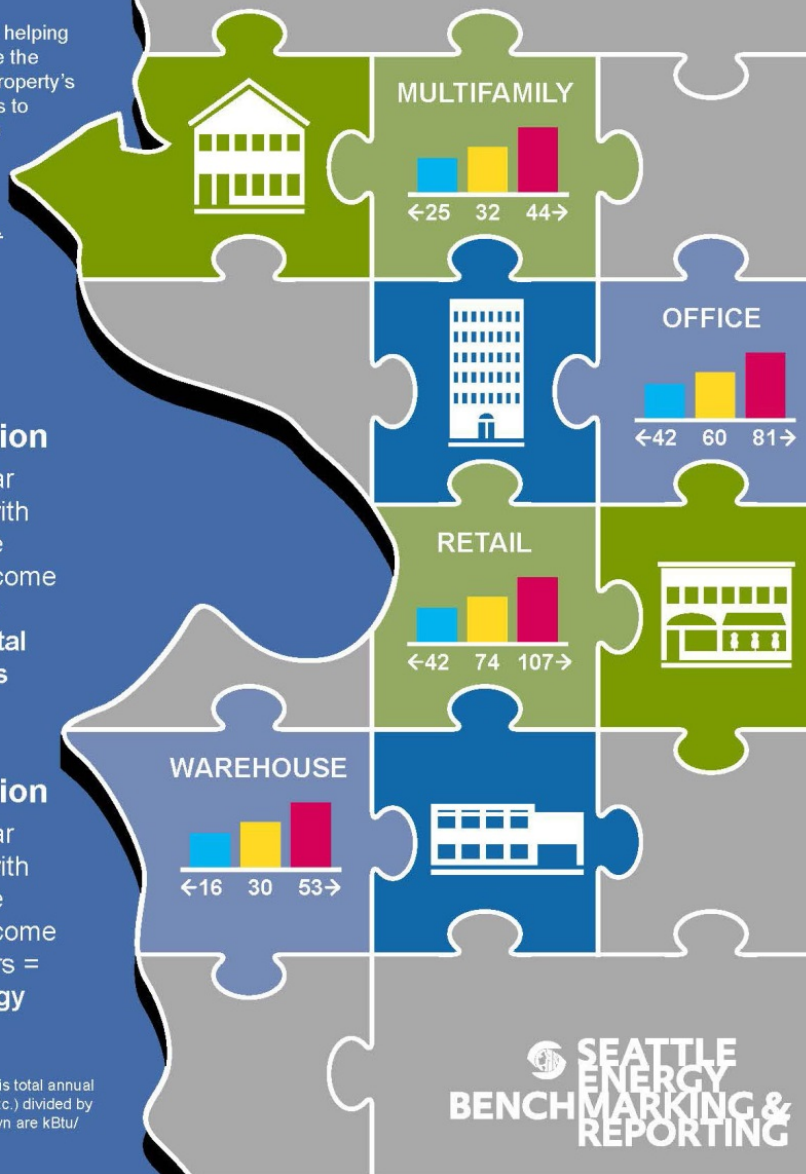
\$90 Million

Saved each year if all buildings with high energy use improved to become low energy users = **42% total energy savings**

*Energy Use Intensity (EUI) is total annual energy use (electric, gas, etc.) divided by gross floor area. Units shown are kBtu/square foot.

How Does Your Building Stack Up?

Energy use per square foot, or EUI*, is used to compare buildings with similar uses but different sizes. Seattle analyzed more than 2,600 buildings that are benchmarking energy use. Below are high, average and low energy use ranges for four building types.



- Benchmarking is here. Is it coming to your city?**
- Opportunity to reach new audiences. Especially multifamily property management.**
- Whole-building energy use data. Great data source, but needs interpretation.**

Thank You!

Nicole Ballinger
nicole.ballinger@seattle.gov

www.seattle.gov/EnergyBenchmarking