East-West GATEWAY
Air Quality Advisory Committee
Oct. 24th, 2023

Building Energy Building Standards

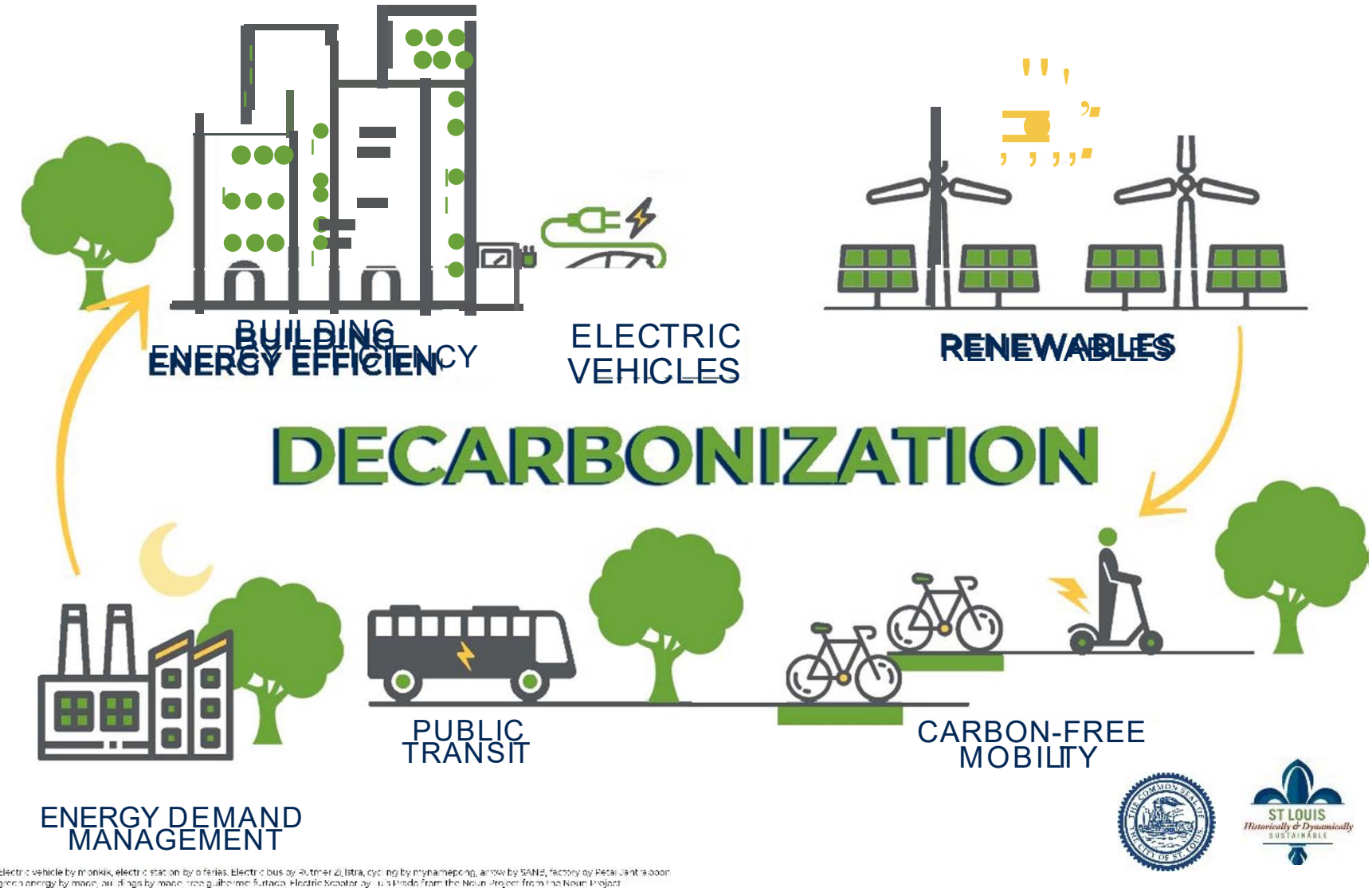
Office of Building Performance
City of St. Louis

building energy exchange
St. Louis

Missouri Gateway
CHAPTER

CITY OF ST. LOUIS CLIMATE PROTECTION INITIATIVE

An Integrated Approach Toward Carbon Neutrality



Electric vehicle by mronkkik, electric station by o ferlas, Electric bus by Rutmer Zijlstra, cycling by mynamepong, arrow by SANE, factory by Petal Jantaboon, green energy by mace, buildings by mace, tree guillermo furtado, Electric scooter by [illegible] from the Noun Project from the Noun Project.

What is Benchmarking?

- Reporting **building's energy & water use annually**
- All commercial, institutional, residential and municipal buildings that are 50,000 square and above
- Manufacturing, industrial, data centers, waste water treatments are exempt

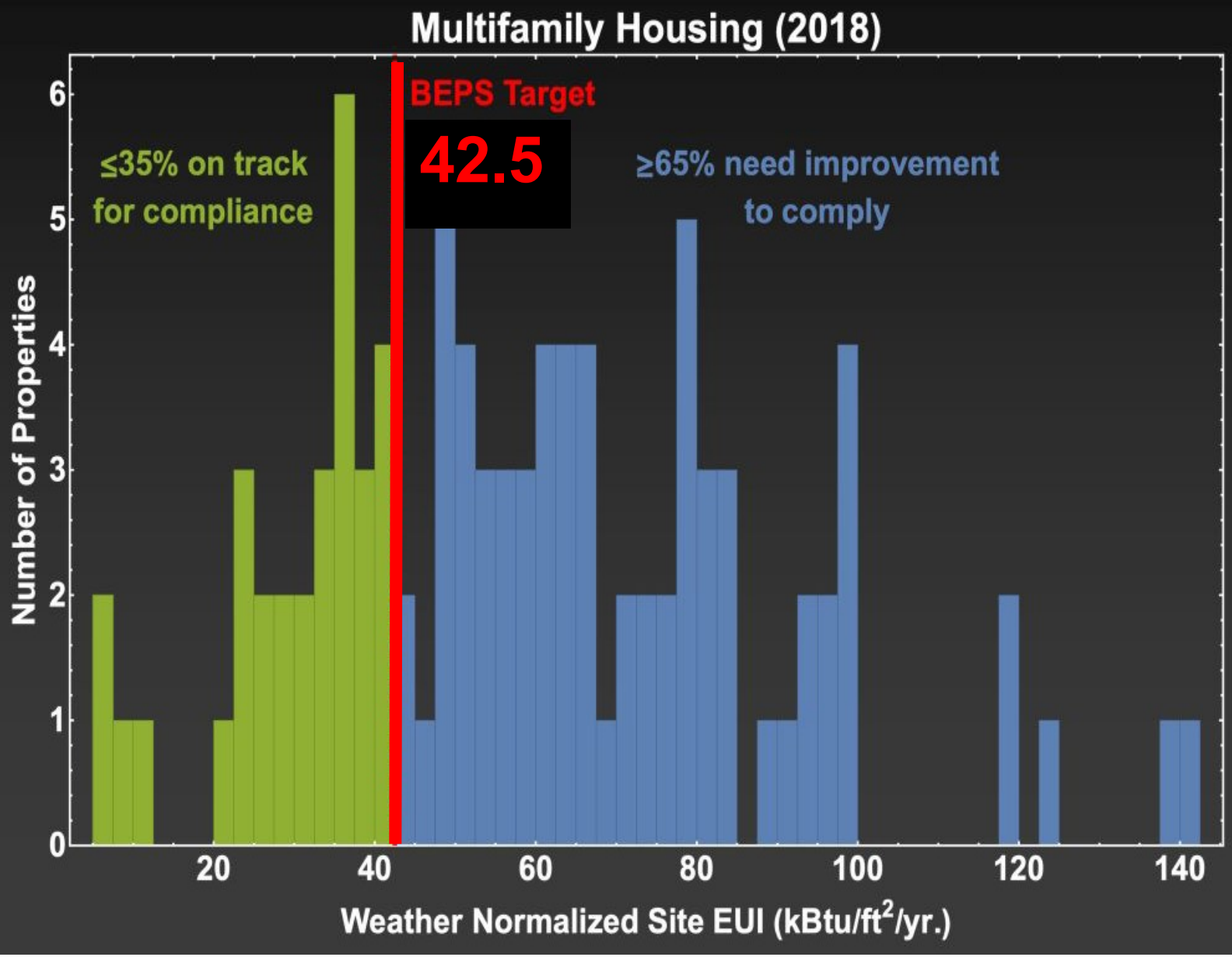
Reporting Deadline is May 1 for previous calendar year's data

Building Energy Performance Standard (BEPS)

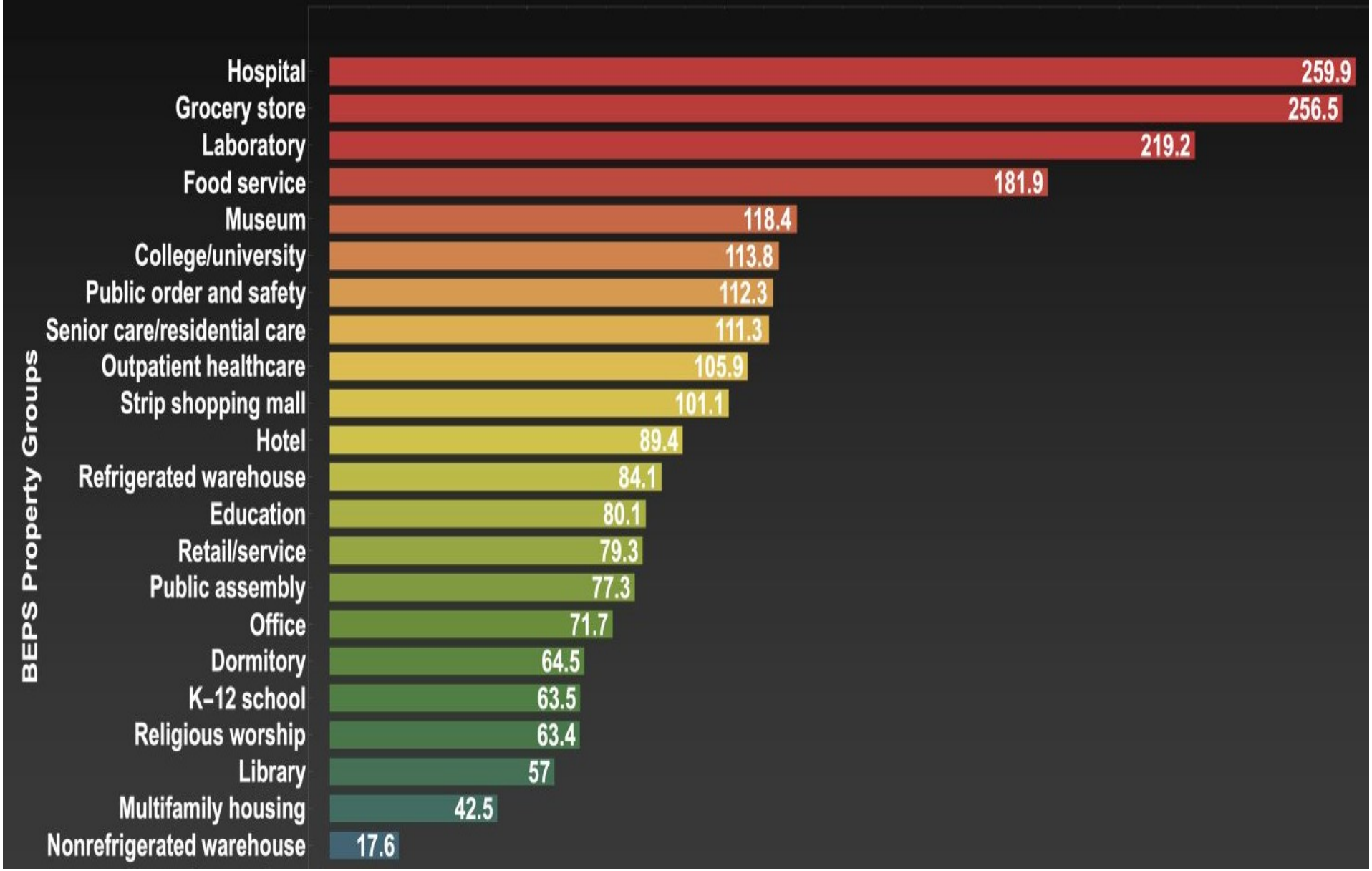
What is BEPS?

- Performance metric: **Weather normalized Site Energy Use Intensity** (EUI) in kBtu/ft²
- Standards are calculated such that at least 65% of buildings have to improve their energy performance.

Setting a "Target" for Building Energy Performance



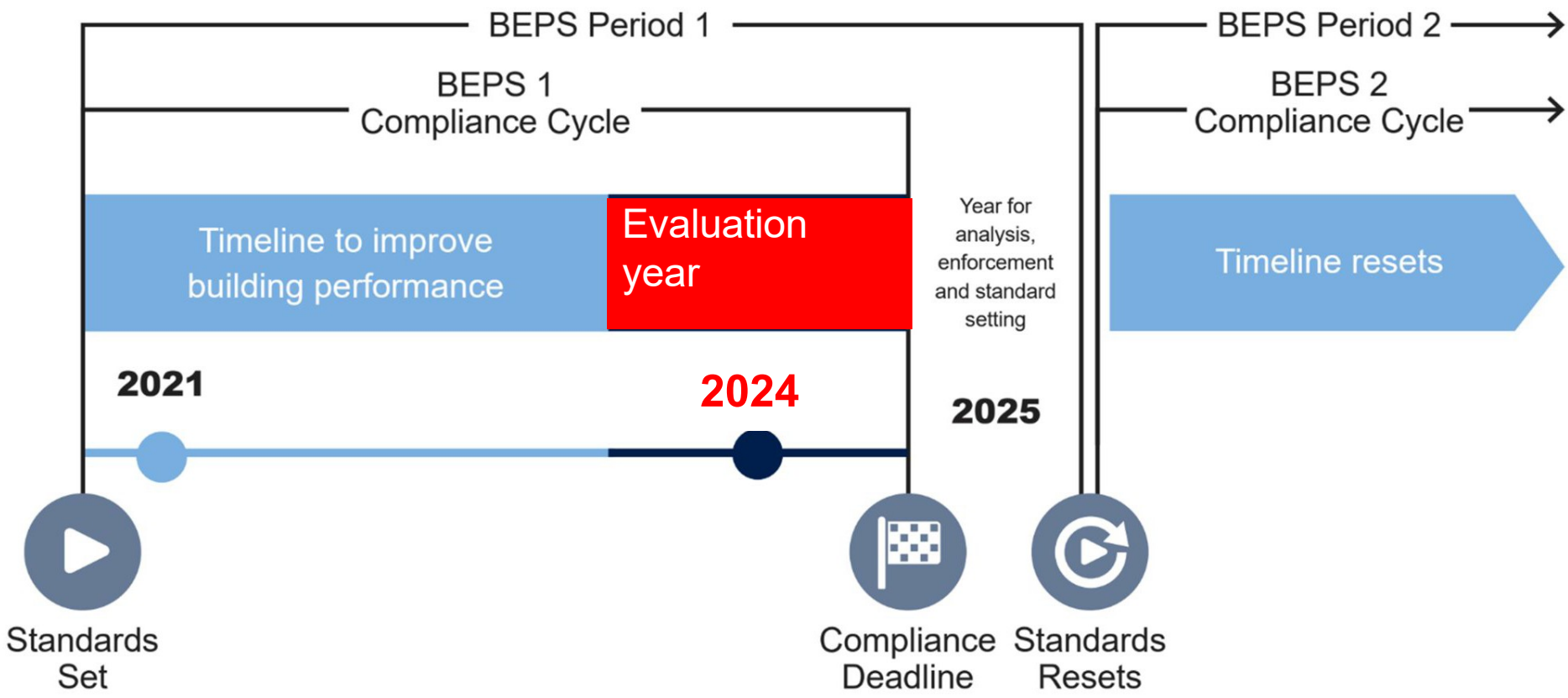
BEPS Target EUIs



BEPS timeline

- **Most building-** 4 years to meet the standard (**2024**).
- **Affordable housing and houses of worship**- 6 years to meet the standard (2026).

BEPS compliance cycle 1 timeline



BEPS Timeline

We are in the 1st Compliance Cycle!

- Evaluation Year is 2024
- **Energy efficiency improvements need to be implemented by year 2024**

- Verification required only for evaluation year of each compliance cycle (year 2024/2026)

BEPS Compliance Pathways

1) Performance

2) Early Adopter

Prefered

3) Narrow the Gap (Alternative Compliance)

4) Custom (Alternative Compliance)

Unable to meet BEPS target due to unusual circumstances

BEPS Compliance Pathways cont.

1) Performance

Special requirements: No
Application required: No

Meet or be below the BEPS target are compliant for that Cycle.

Properties with EUIs already in compliance may simply maintain their performance and report performance data with third-party verification.

BEPS Compliance Pathways cont.

2) Early Adopter

Special requirement: Yes
Application required: No

Meet or be below the BEPS target for their Property Type and

-Reduce EUI by 20% or more from its 2018 Baseline- complaint for 2 Cycles

-Reduce EUI by 50% or more from its 2018 Baseline- complaint for 3 Cycles.

Example: 2018 EUI was 120 kBtu/ft², BEPS target for Education is 80. If they reduce EUI to 79 kBtu/ft² (25%), or EUI to 60 kBtu/ft² (50%)

BEPS Compliance Pathways cont.

3) Narrow the Gap:

Special requirements: Yes

Application required: No

-Reduce EUI by 50% of the difference between their *2018 Baseline* and BEPS Target.

-This Path is only available for the first two compliance Cycles

Example: 2018 EUI was 120 kBtu/ft², BEPS target for Education is 80, Narrow the Gap is 100 kBtu/ft²

BEPS Compliance

Special requirements: Yes
Application required: Yes

4) Custom Alternative Compliance (CACP):

Only for buildings that cannot meet first three paths due to unique limitations

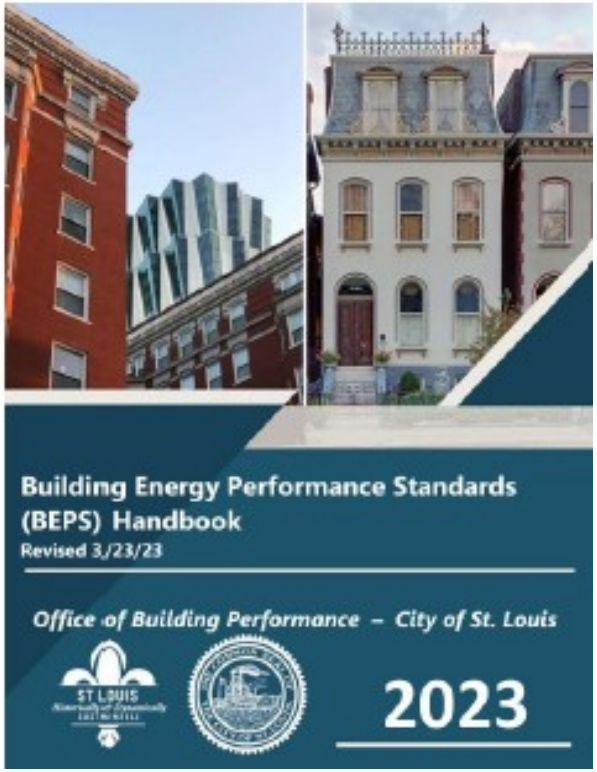
- Eligibility and CACP plan- possible appeals if denied
- Requires ASHRAE Level 2 Audit or Retrocommissioning
- Enacts energy efficiency measures recommended by audit
- Projects milestones
- Timeline
- Financing
- Binding agreement between city and building owner

BEPS: Next steps

- Check your building's performance and BEPS Target. Are you on track to comply?

- Understand Compliance Pathways

- Energy audit, plan, financing, implementation, corrective action



Benchmarking & BEPS: Progress

- 2021 Benchmarking compliance is 89%
- 2022 Benchmarking compliance is 76% and counting

- CACP Eligibility deadline extended
- CACP Plan due on June 1st, 2024

Enforcement and noncompliance

- Penalties up to up to $500/day
- **Revocation of building's occupancy permit!!**

OFFICE OF BUILDING PERFORMANCE
City of St. Louis

Website: **stlbenchmarking.com**

Email: **benchmarking@stlouis-mo.gov**

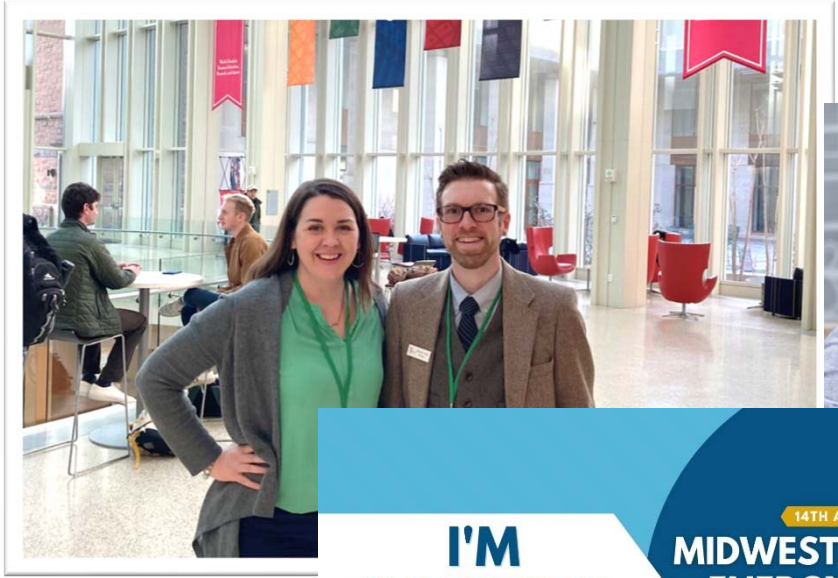
Katarina Michalova
Program Manager II

michalovak@stlouis-mo.gov
573-416-0296

be ex STL

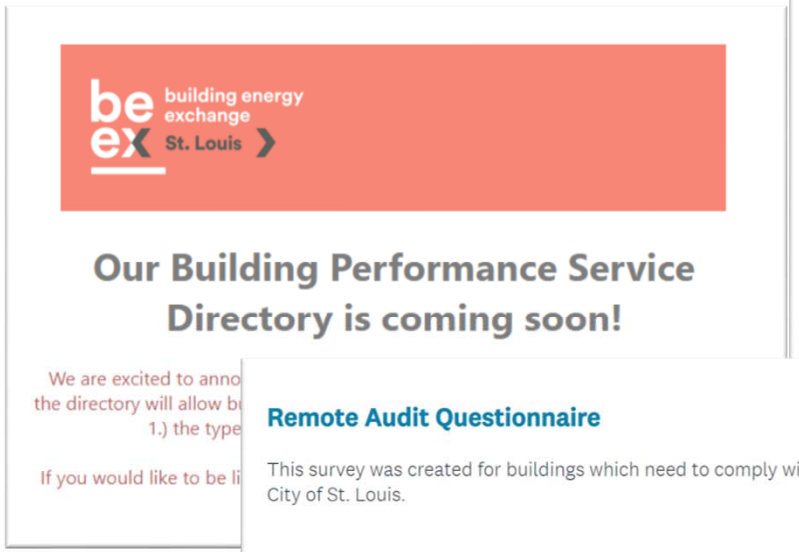
building energy exchange
St. Louis

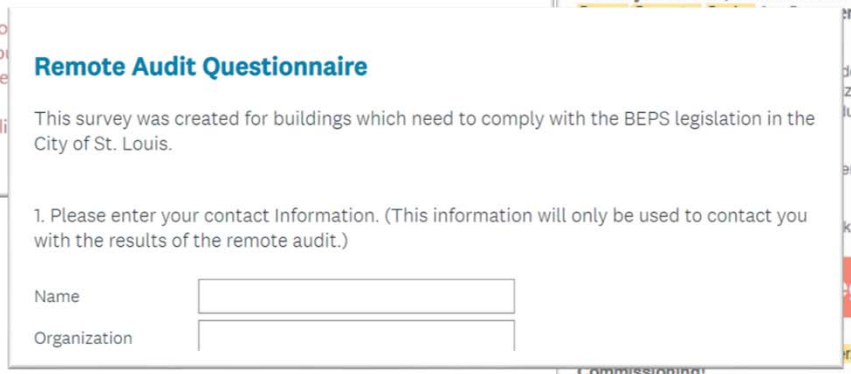
Working Together

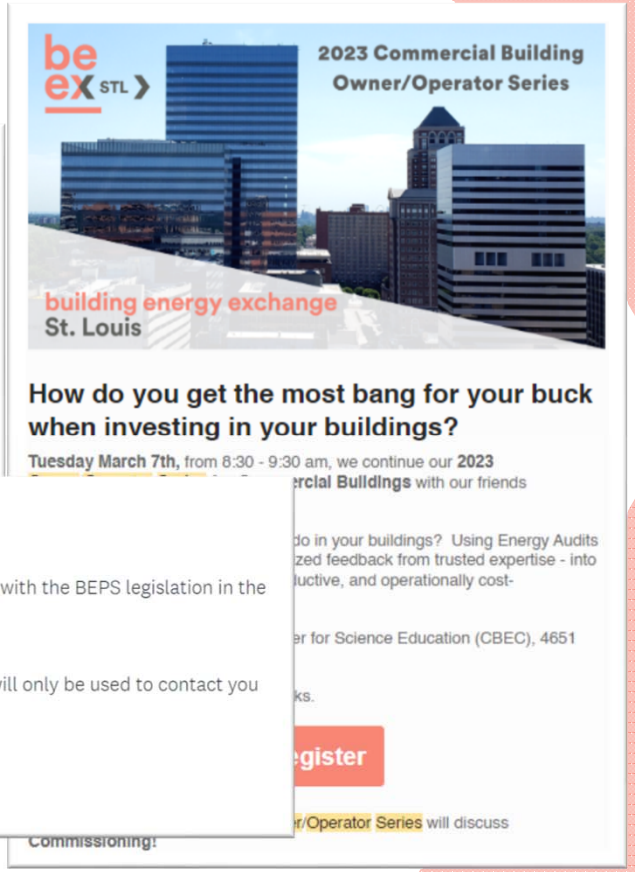


Creating Conversation

Creating Tools

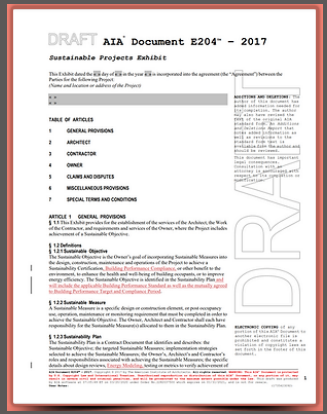






Asking Questions

Provide and Share Resources



Support and Host Educational Events

Thank you to our Sponsors!

Ameren MISSOURI

Missouri Gateway Green Building Council

Washington University in St. Louis

spire

GUARANTEE ELECTRICAL

HOK

EMERSON

JARRELL MECHANICAL CONTRACTORS

IMT INSTITUTE FOR MARKET TRANSFORMATION

NRDC NATURAL RESOURCES DEFENSE COUNCIL

be ex

IFS INTEGRATED FACILITY SERVICES