Decarbonization and What it Means for Multifamily Properties

Green Financing Lender Learning Series

June 21, 2023

Fannie Mae®

Opinions, analyses, estimates, and other views expressed by Bright Power and guest speakers are their own and do not necessarily represent the views of Fannie Mae or its management.

Polling Question

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2023 Multifamily Energy and Water Survey

Deadline Extended! The 2023 Survey opened **March 1, 2023** and will run through **August 31, 2023***.

2023 Multifamily Energy and Water Survey Website

Fannie Mae has partnered with industry leaders on a national survey effort to collect and analyze multifamily property energy and water consumption in the United States.

The anonymized survey data will be used to update the ENERGY STAR® 1-100 energy performance score and the U.S. Environment Protection Agency's (EPA) Water Score for multifamily housing.

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MBA MORTGAGE BANKERS ASSOCIATION

Enterprise

NAA NATIONAL APARTMENT ASSOCIATION

CRE Finance Council® The Voice of Commercial Real Estate Finance

NMHC NATIONAL MULTIFAMILY HOUSING COUNCIL

NeighborWorks® AMERICA

SAHF STEWARDS OF AFFORDABLE HOUSING FOR THE FUTURE

ULI Urban Land Institute

BRIGHT POWER

Agenda

Multifamily Decarbonization in Context – What Does it Actually Mean?
City Perspectives – Building Performance Standards

- Washington, DC
- Boston, MA
- New York City, NY
- St. Louis, MO

Q&A
Get Smart on Decarbonization – Optimizing Incentives to Meet Capital Needs

Multifamily Decarbonization – What Does it Actually Mean?

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Building Impact with Multifamily Decarbonization

Path to decarbonization

Grid Decarbonization

As the electric grid supply gets cleaner, the emissions from efficient, electrified buildings will further decrease.

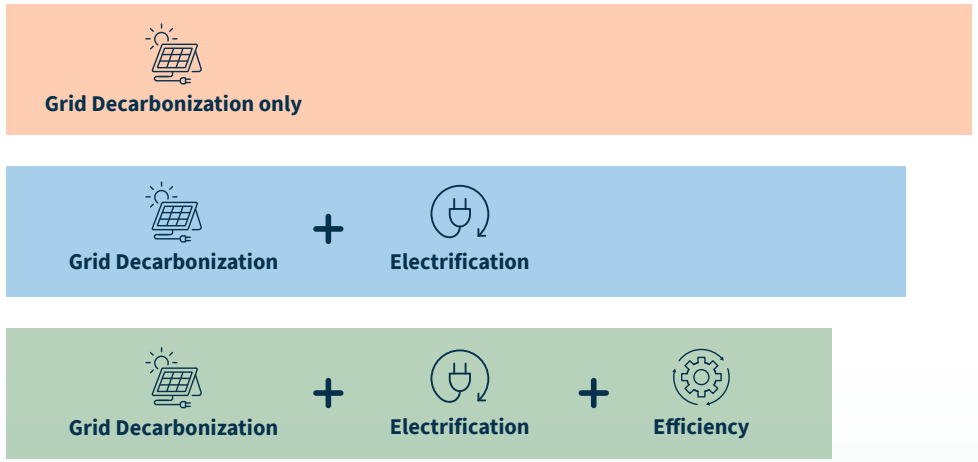
Electrification

Converting fossil fuel equipment to efficient electric equipment (i.e., heat pumps) significantly decreases site energy use.

Efficiency

Reducing energy consumption is key to decarbonization. The cleanest kilowatt-hour is the one you never use.

Estimated total emissions from Multifamily properties (MMT CO2e)



Change in electricity grid over time

2020
Electricity Grid is **20%** powered by clean energy

2035
Electricity Grid is **95%** powered by clean energy

2050
Electricity Grid is **100%** powered by clean energy

Why does it matter?

Estimated

320 million

metric tons of emissions saved by layering electrification and efficiency with grid decarbonization

That's equivalent to

the emissions from **86** coal-fired power plants in one year **or**

the carbon sequestered by **5.3 billion** tree seedlings grown for 10 years.

Estimated emissions from multifamily properties based on Fannie Mae analysis and Cambium 2022 future-looking emission factors, developed by NREL (National Renewable Energy Laboratory).

Electrification Cost Analysis

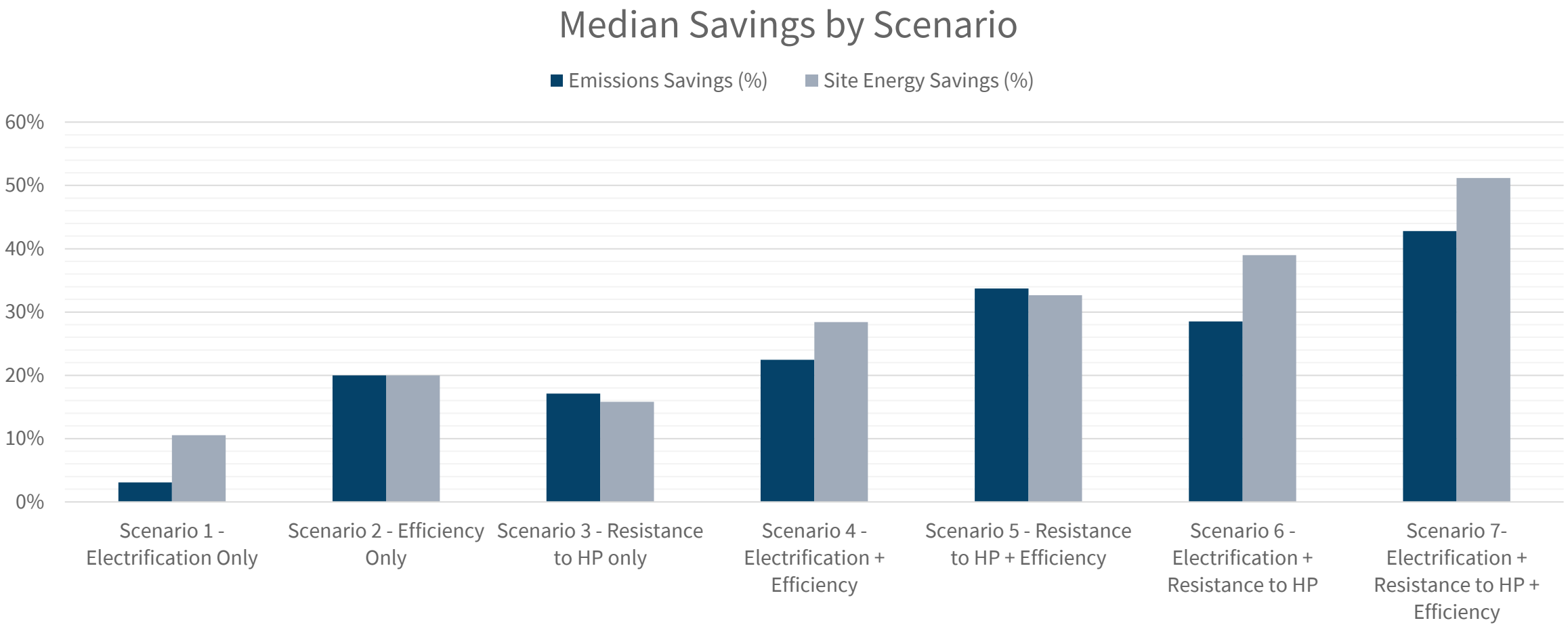
Insights from Fannie Mae's 2022 Multifamily Electrification and Decarbonization Roadmap

The cost of electrification depends on the specific system configuration being installed.

Category	Efficiency Measure	Cost Range (per unit)
Water heating	Install central heat pump water heater	$2,000 - $8,000
Water heating	Install in-unit heat pump water heater	$1,500 - $3,000
Heating	Convert central gas boiler to central heat pump	$10,000 - $30,000
Heating	Convert in-unit gas boiler to in-unit heat pump	$5,000 - $15,000
Heating	Convert in-unit PTAC or gas furnace to in-unit PTHP	$4,000 - $12,500
Cooking	Install induction ranges	$1,000 - $3,000
Dryers	Install electric dryers	$1,000 - $3,000

Emissions & Energy Savings

Insights from Fannie Mae's 2022 Multifamily Electrification and Decarbonization Roadmap



Multifamily Benchmarking

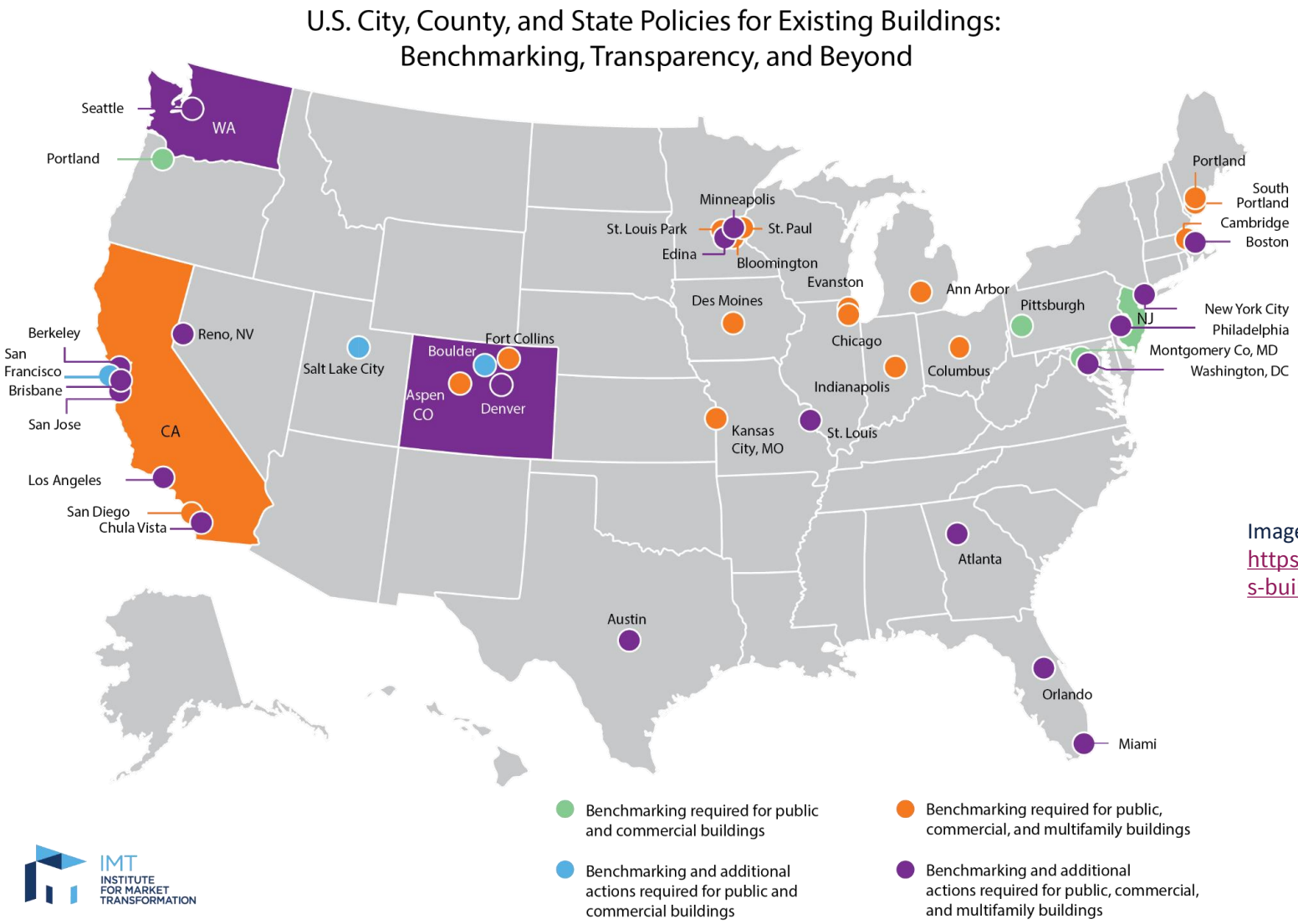


Image Source:
https://www.imt.org/resources/map-u-s-building-benchmarking-policies/

Building Performance Standards

Building Performance Standards: requirements for minimum building energy performance with penalties if targets are missed.

Jurisdictions with BPS Policies

Countries

France
Netherlands
United Kingdom

States

Colorado
Maryland
Washington

Localities

Boston, MA
Chula Vista, CA
Denver, CO
Montgomery County, MD
Boulder, CO
New York City, NY
Reno, NV
Washington, DC

New in 2023

Cambridge, MA
Boulder, CO
Seattle, WA

Image Source: https://www2.aceee.org/e/310911/tegy-reduce-emissions-existing/3s2mj7w/1364457476?h=_SfXCZzv_GwPdF90SoBVbdY5L1gHED1Ljfz7jkajbJQ

Polling Question

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City Perspectives – Building Performance Standards

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Washington, DC

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Building Innovation Hub

DC's Building Energy Performance Standards (BEPS)

Fannie Mae Green Learning Series on Multifamily Decarbonization and Electrification

June 21, 2023

Speakers

Who's here with us today.

Mary Thomas
Associate Director,
Building Innovation Hub
Institute for Market Transformation
mary.thomas@imt.org

About us

Who we are.

The Building Innovation Hub, a project of IMT, helps building industry professionals in and around Washington, DC create and operate high-performing buildings. The Hub connects professionals and provides information and programming.

The goal of the Hub is to meet the current needs of the building industry while simultaneously pushing the industry towards the innovative solutions that we will need to build and operate high-performing buildings.

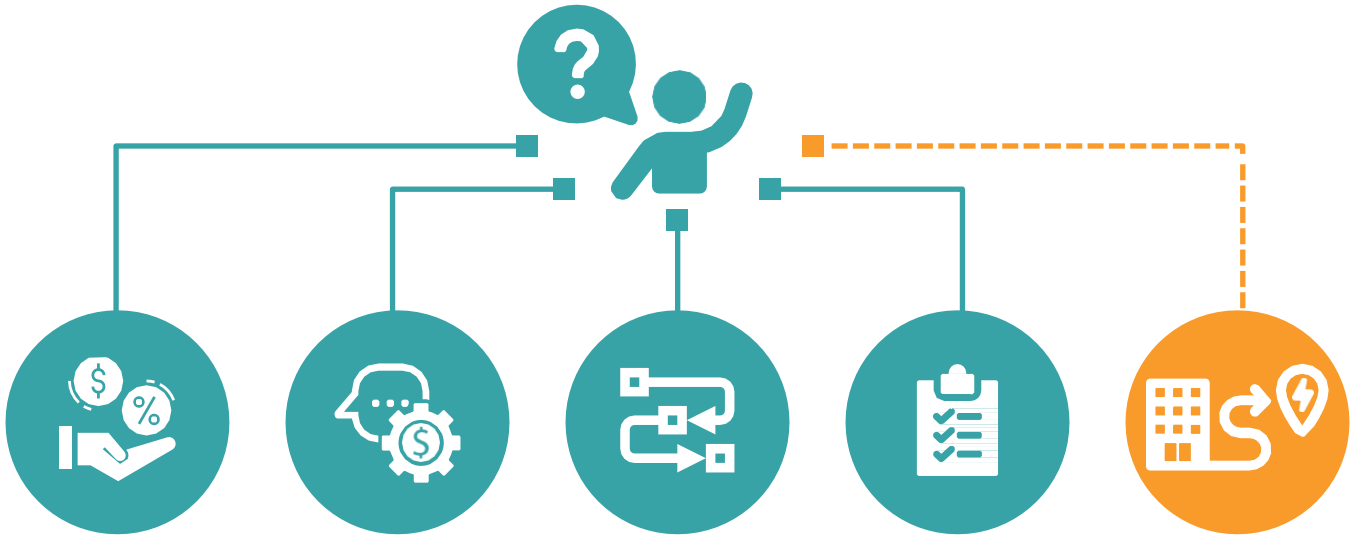
Building Innovation Hub

A program of

IMT
INSTITUTE FOR MARKET TRANSFORMATION

Where we fit in

Evaluating what already exists.



DC's Climate Goals

And how we achieve them.

100%

of the District's electricity supply will be from renewable energy by 2032

60%

reduction in District-wide energy use by 2030

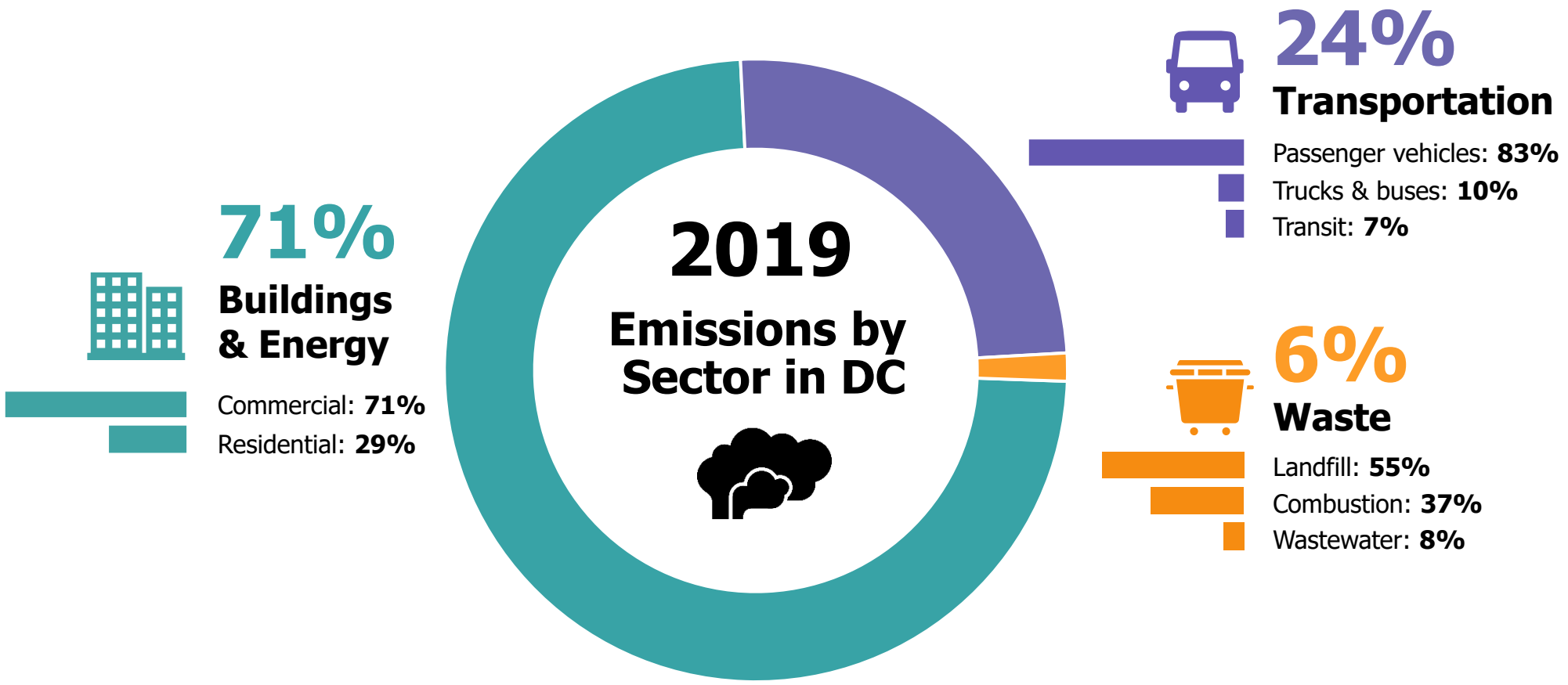
100%

reduction in GHG emissions by 2045

Carbon Neutrality

Linking to DC's goals

Tying to the District's climate goals.

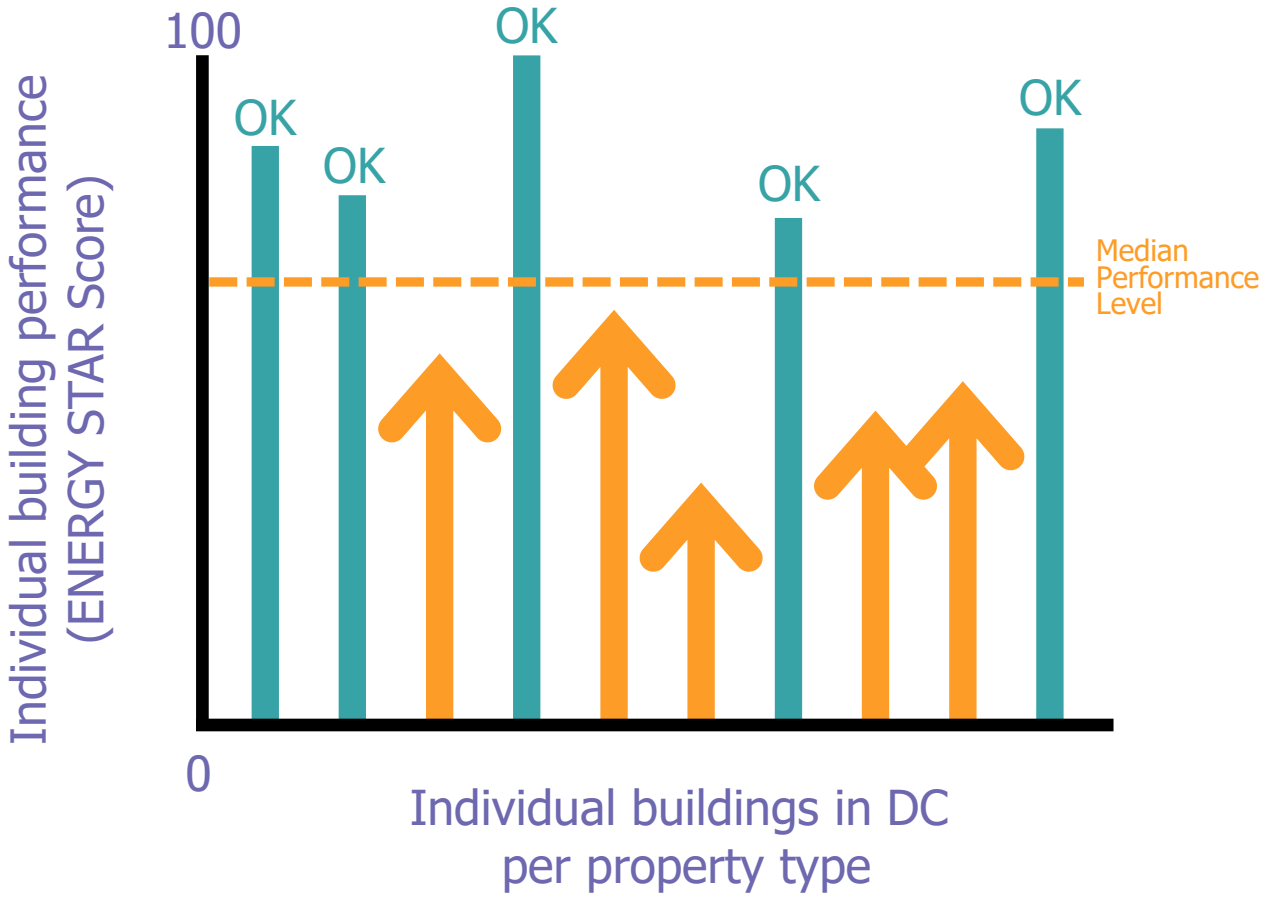


What is BEPS?

The basic concept.

A BEPS set minimum thresholds for energy performance for existing buildings.

These standards are based on and measured against a building's demonstrated energy performance, as shown in their benchmarking data.



Standards

What to compare your building to.

The Standards for the First BEPS Period. The standards, the median levels of performance with which the BEPS rules will apply per property type.

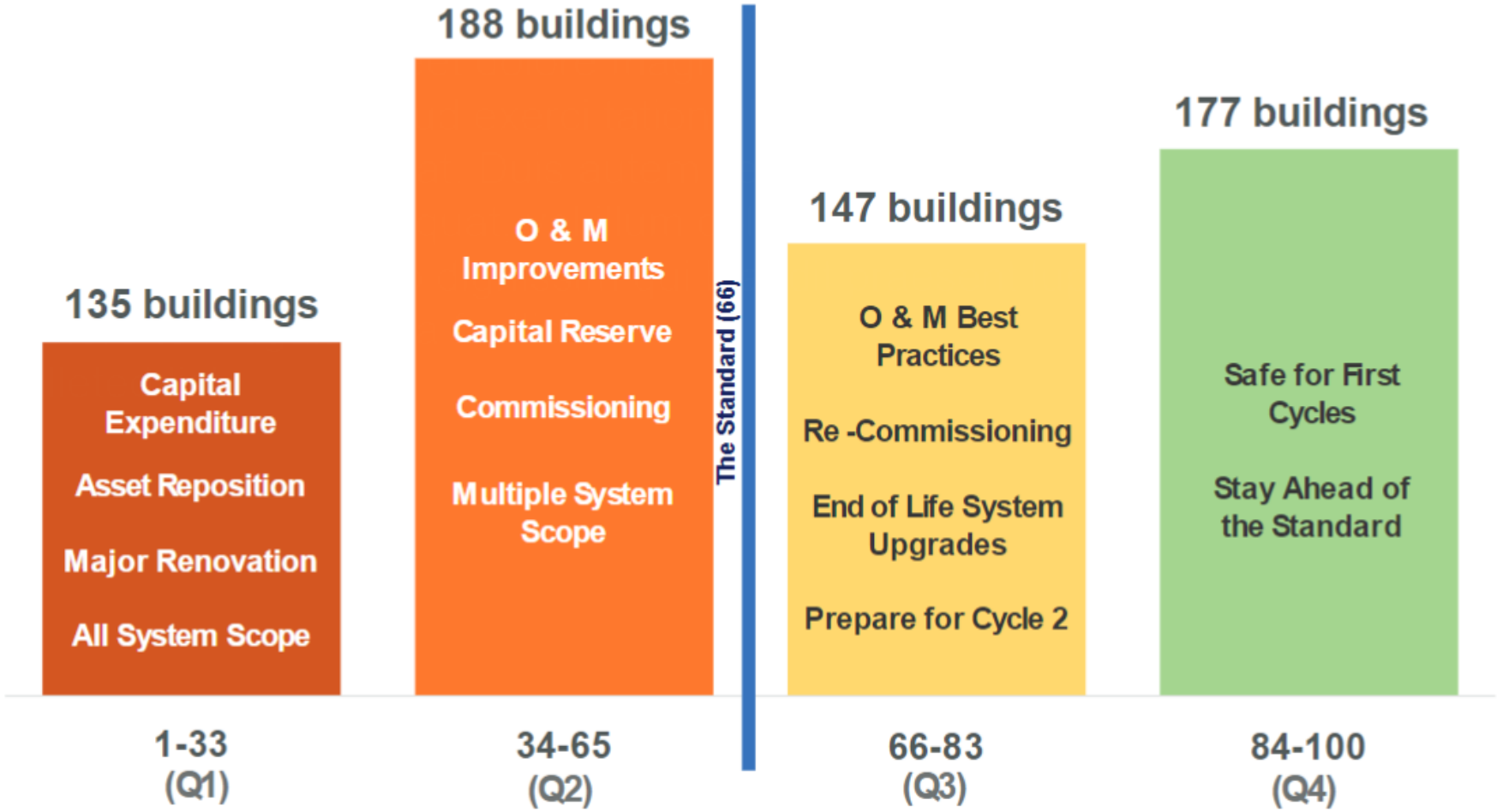
Property Type	ENERGY STAR Score	Source EUI
Hotel	54	183.9
Multifamily Housing	66	110.7
Office	71	153.7
K-12 School	36	139

Click here to find BEPS for other property types

Click here to find out your BEPS status

What existing buildings need

Multifamily under BEPS Cycle 1.



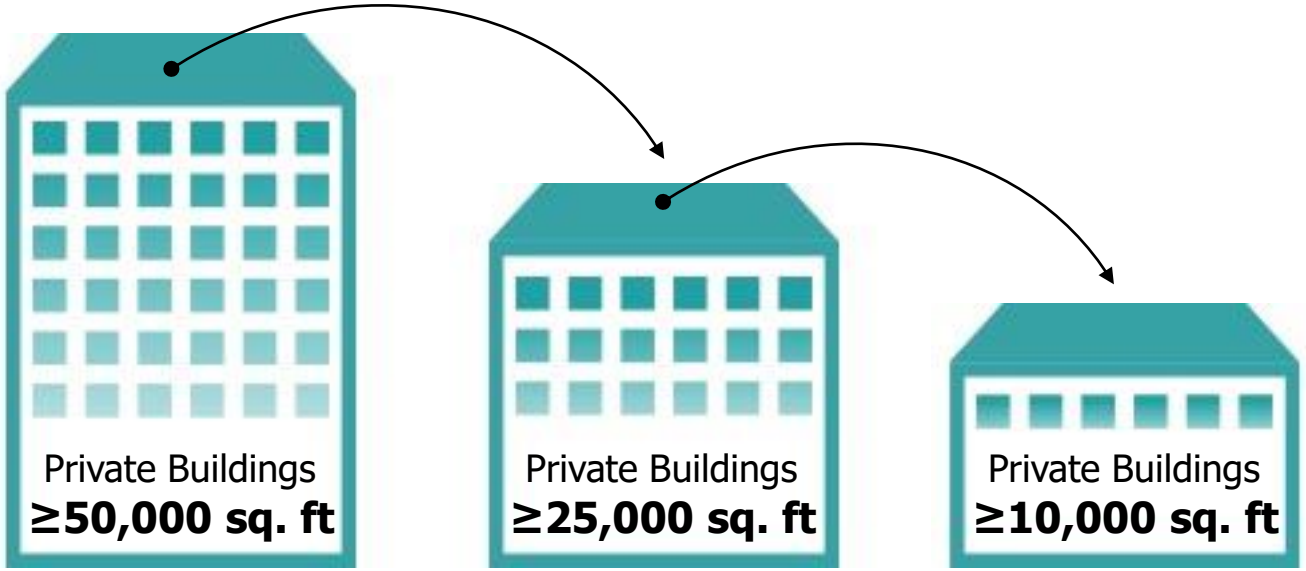
Size-based time frames

Buildings of different sizes enter compliance cycles over time.

Multifamily Housing

647

The **first cycle** of BEPS affects **1,662** buildings. Half will need to improve performance.



When the size threshold drops for the **second cycle**, BEPS will affect >**5,000** buildings. Half will need to improve performance.

Have been benchmarking since 2013

BEPS Cycle started Jan. 1, 2021

Started benchmarking in 2021

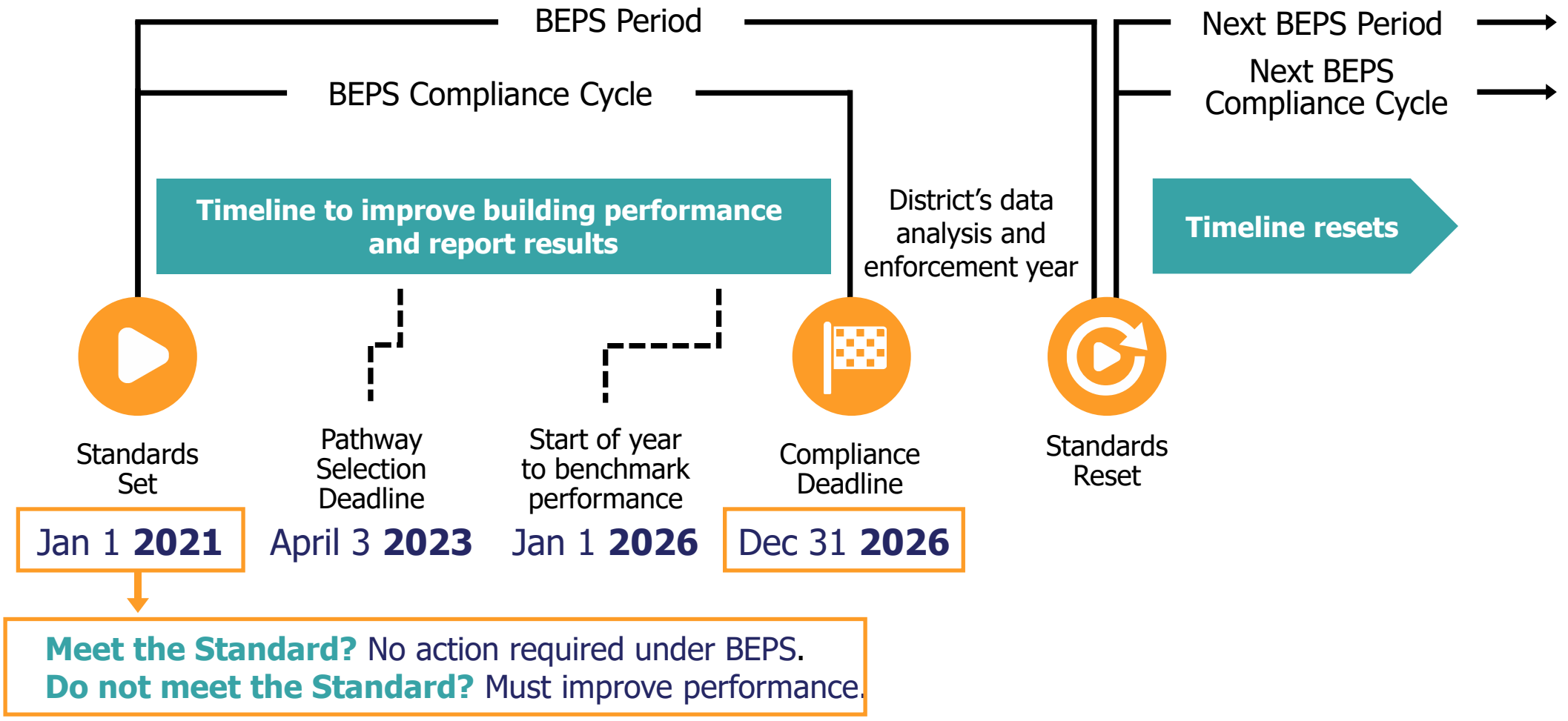
BEPS Cycle starts: Jan. 1, 2027

Required to start benchmarking during 2024

BEPS Cycle starts: Jan. 1, 2033

Compliance cycle

The basic concept.



BEPS compliance pathways

Available options.

Performance Pathway

Standard Target Pathway

Prescriptive Pathway

Alternative Compliance Pathway

Compliance Pathways. Building owners have a variety of options for bringing their buildings into compliance, flexibility is built into the program.

Buildings that **do not meet the BEPS** were required to select a compliance pathway by **April 3, 2023**. Approximately 80% of buildings selected pathways by the deadline and the remaining buildings are encouraged to do so as soon as possible.

All buildings that are required to **benchmark** must have their data third-party verified by **April 1, 2024** (for CY 2023)

What are the costs?

Estimated cost of BEPS and enforcement details.

Cost-Benefit Study. DOEE estimated the total cost of compliance with the BEPS program to be on average **$10 per square foot**.

Civil Infractions. Fines for failure to meet the reporting and verification requirements of a building's approved Pathway. Updates posted in Guidebook Version 1.1.

Alternative Compliance Penalties. For failure to meet the energy performance requirements of the building's approved Pathway. Max. penalty for a building is **$10 per GSF** or **$7.5M**.

Table 22 – Alternative Compliance Penalty Adjustment by Pathway

Pathway	Adjustment Factor	Example
Performance Pathway under §§ 3518.1(a) or 3518.1(e)(1)	The maximum penalty shall be adjusted by calculating the percent of Site EUI reduction achieved divided by twenty percent (20%).	Building A achieves a 10% reduction in Site EUI. Its maximum penalty is reduced by fifty percent (50%) (10/20 = 50%).
Standard Target Pathway under §§ 3518.1(b) or 3518.1(e)(2)	The maximum penalty shall be adjusted by dividing the building's distance from the BEPS achieved by the distance from the BEPS for buildings of the same property type that are twenty percent (20%) less efficient than the BEPS	Building B is six (6) points away from the BEPS by the end of the Compliance Cycle. A building of Building B's property type that is twenty percent (20%) less efficient than the BEPS is fifteen (15) points away from the BEPS. Therefore, the final maximum penalty is forty percent (40%) of the maximum alternative compliance penalty described in § 3521.1 (6/15 = 40%). Please refer to Appendix D for additional examples on applying the maximum penalty adjustment for the Standard Target Pathway.
Prescriptive Pathway under § 3518.1(c)	The maximum penalty shall be adjusted by calculating the number of Prescriptive Pathway points actually earned divided by total needed.	Building C completes measures worth fifteen (15) points but needs twenty-five (25) to meet the energy performance requirements. Its maximum penalty is reduced by sixty percent (60%) (15/25 = 60%).
Alternative Compliance Pathway under § 3518.1(d)	The maximum penalty shall be adjusted using adjustment factors described in the Alternative Compliance Pathway agreement with DOEE, and shall be no less stringent than penalties for other Pathways as described under § 3519.8.	

Hub and DOEE Resources

How we can help.

The Hub's BEPS Plain Speak and Tools

Basic overview of BEPS program, Regulations and Guidebook. Pathway Timelines, Energy Audit Scopes of Work, and more.

The Hub's Find-A-Vendor Portal

Connect building improvement projects to local expertise, including smaller, more diverse businesses needed to truly support the green economy.

The Hub's Funding and Financing Map

A searchable database of all available incentives and financing available to support building improvement projects

DOEE: Building Performance Helpdesk and Knowledgebase

Official DC platform for Regulations, FAQs, Building Owner Portal, and submitting helpdesk tickets.

Building Innovation Hub

IMT INSTITUTE FOR MARKET TRANSFORMATION

Check us out!

https://buildinginnovationhub.org | https://www.imt.org

Boston, MA

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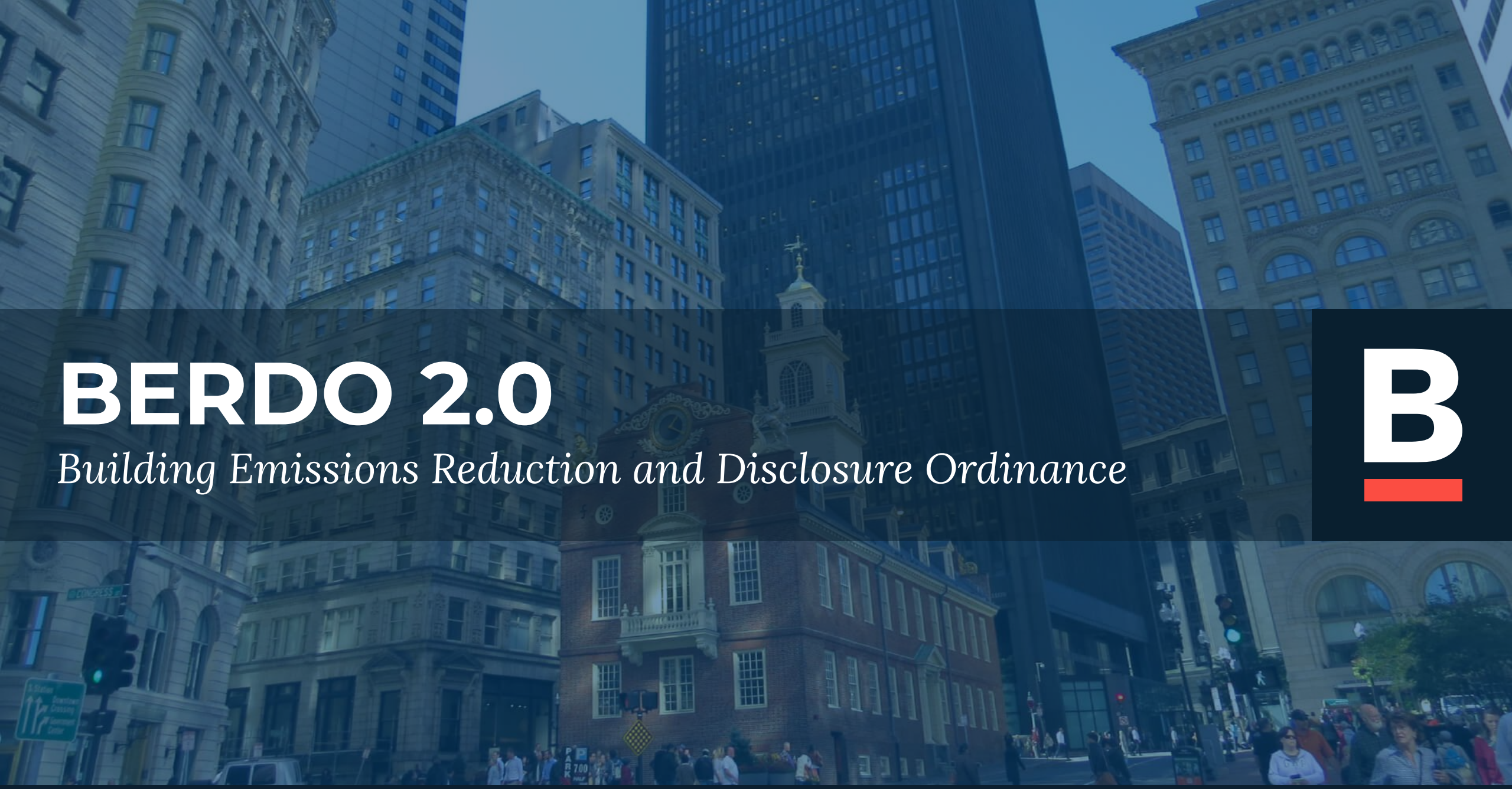


BERDO 2.0

Building Emissions Reduction and Disclosure Ordinance

CITY OF BOSTON

BERDO 2.0 Key Features

Building Emissions Reduction and Disclosure Ordinance

- **Covered Buildings include:**
  - Nonresidential buildings that are 20,000 ft2 or larger* (excluding parking)
  - Residential buildings that have 15 units or more
- **Annual whole-building energy and water use reporting**
- **Starting in 2025, buildings will need to meet declining emissions standards.**
  - Buildings can reduce their emissions by investing in energy efficiency and fuel switching, installing or purchasing renewable energy, and/or by making alternative compliance payments.
- **BERDO will be overseen by a new Review Board**
  - The Review Board will have oversight over BERDO flexibility measures

EMISSIONS STANDARDS

- Developed through the technical analysis process
- Based on existing buildings in Boston
- Aligned with citywide climate goals
- Multi-use buildings can adopt a blended emissions standard

Building use	Emissions standard ($kgCO_2e/SF/yr.$)					
	2025-2029	2030-2034	2035-2039	2040-2044	2045-2049	2050-
Assembly	7.8	4.6	3.3	2.1	1.1	0
College/ University	10.2	5.3	3.8	2.5	1.2	0
Education	3.9	2.4	1.8	1.2	0.6	0
Food Sales & Service	17.4	10.9	8.0	5.4	2.7	0
Healthcare	15.4	10.0	7.4	4.9	2.4	0
Lodging	5.8	3.7	2.7	1.8	0.9	0
Manufacturing/ Industrial	23.9	15.3	10.9	6.7	3.2	0
Multifamily housing	4.1	2.4	1.8	1.1	0.6	0
Office	5.3	3.2	2.4	1.6	0.8	0
Retail	7.1	3.4	2.4	1.5	0.7	0
Services	7.5	4.5	3.3	2.2	1.1	0
Storage	5.4	2.8	1.8	1.0	0.4	0
Technology/Science	19.2	11.1	7.8	5.1	2.5	0

OPTIONS TO RETROFIT AND FUEL SWITCH

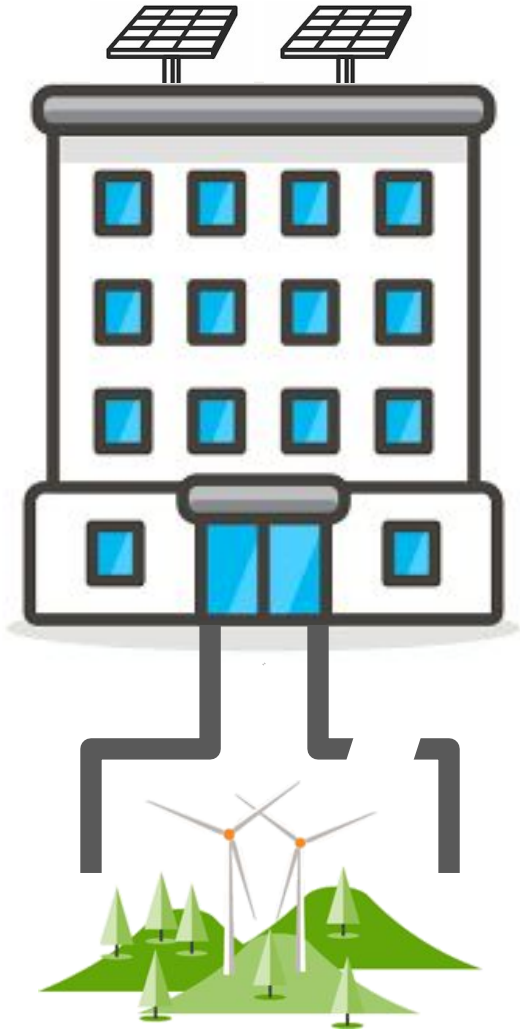
- Building owners may undertake measures to improve energy performance and reduce fossil fuel consumption within the building
  - *Envelope improvements*
  - *Appliance and mechanical upgrades and switches (heat pumps, solar, geothermal)*
  - *Building operations and controls*
- The City is expanding a Retrofit Resource Hub to connect building owners with appropriate technical assistance and financial resources.

Credit: Indiana Public Media

OPTIONS TO PURCHASE RENEWABLE ELECTRICITY

Renewable energy can be used to reduce emissions from a building's electricity use.

1. Deploy renewable energy onsite;
2. Purchase renewable electricity that is generated offsite.
    - Boston community choice electricity (cityofbostoncce.com)
    - MA Class I Renewable Energy Certificates from non-emitting renewable sources
    - Power purchase agreements, including virtual PPAs, for RECs from non-emitting renewable sources



COSTS TO CONSIDER

A building can come into compliance with the emissions standard by making an **alternative compliance payment of $234/mtCO2e** for any emissions above emissions standard.

If not in compliance, the following fines may be issued

	20,000-34,999 SF or 15 - 34 units	35,000+ SF or 35+ units
Failure to Comply with Reporting	$150/day	$300/day
Failure to Comply with Emissions Standard	$300/day	$1,000/day

FLEXIBILITY MEASURES

- **Portfolios:** owners with more than one covered building may apply to comply across their portfolio.
- **Individual compliance schedules:** buildings or portfolios may submit their own individual compliance plan for approval, which must be aligned with citywide emissions goals.
- **Hardship compliance plans:** buildings or portfolios with unique building characteristics or circumstances that present a hardship in complying with the standard (e.g., affordable housing refinancing timelines, historic designation, financial hardship, existing long-term energy contracts) would be eligible to apply for a hardship compliance plan.

Resources

[BERDO Homepage]

[BERDO Regulations]

[Retrofit Resource Hub]

Contact us:

energyreporting@boston.gov

Q&A

See how Gabrielle Lee from CBRE is supporting and encouraging commitment to diversity and inclusion across the multifamily industry. #MFMagnified

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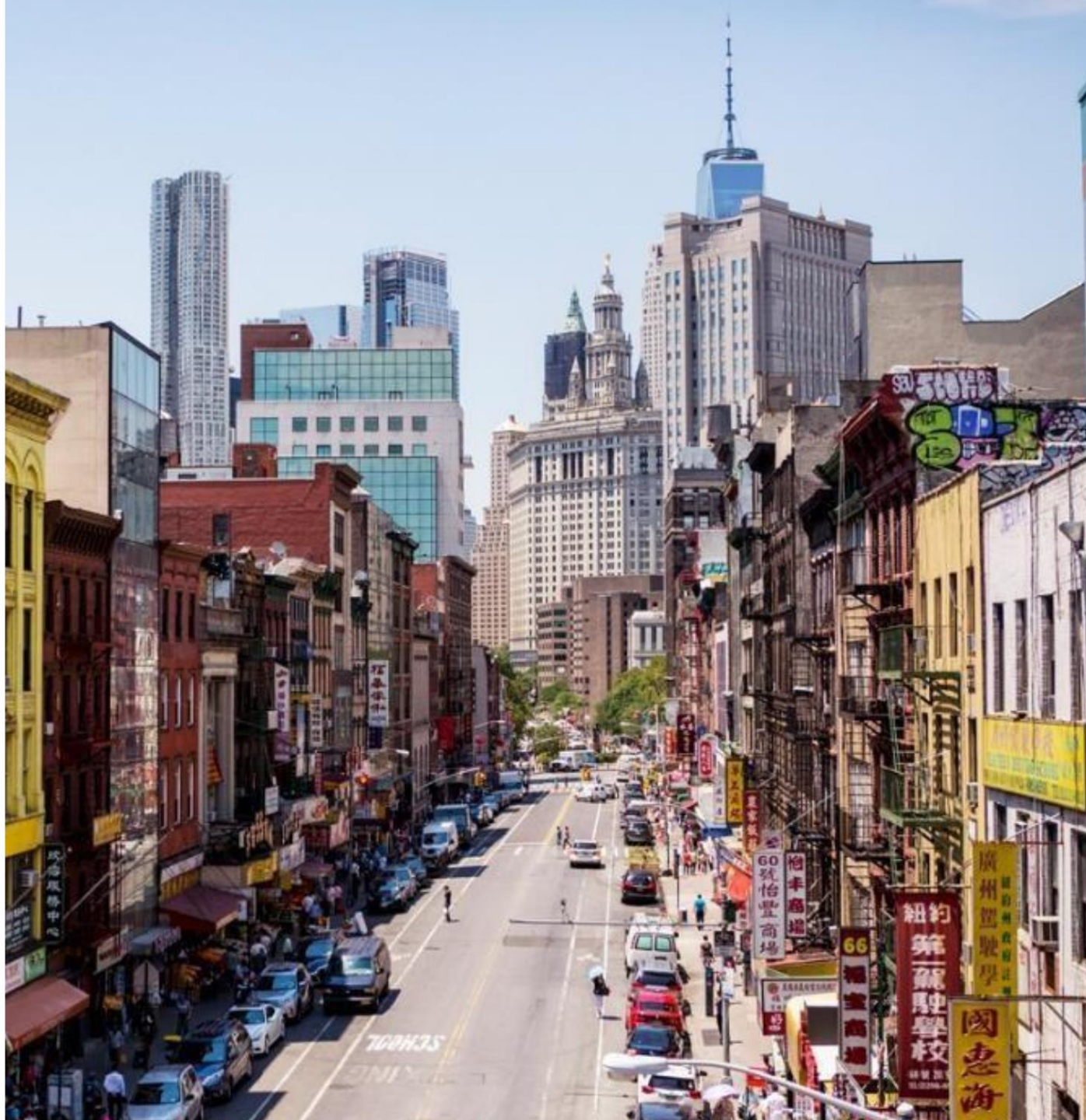
Local Law 97 & NYC Accelerator

Nikki Joseph

Policy Advisor, NYC Mayor's Office of Climate and Environmental Justice



New York City's Pathway to Decarbonization

- 68% of New York City's emissions comes from buildings
- 90% of New York City buildings will still be here in 2050
- New York City aims to be carbon neutral by 2050
  - Building decarbonization policies
  - Free technical assistance
  - Economic development
  - Equitable transition away from fossil fuels

Climate Mobilization Act (CMA)

The **CMA** is the largest climate solution put forth by any city in the world. It consists of a slate of climate laws designed to dramatically cut carbon in New York City. Central to the CMA is Local Law 97 (LL97), a first-of-its-kind legislation placing emissions limits on New York City's large buildings.

Image Source: Grist

NYC ACCELERATOR

New York City
Local Law Compliance

New York City Building Energy Laws

+ Benchmarking (LL84)
+ Energy Audits and Retrocommissioning (LL87)

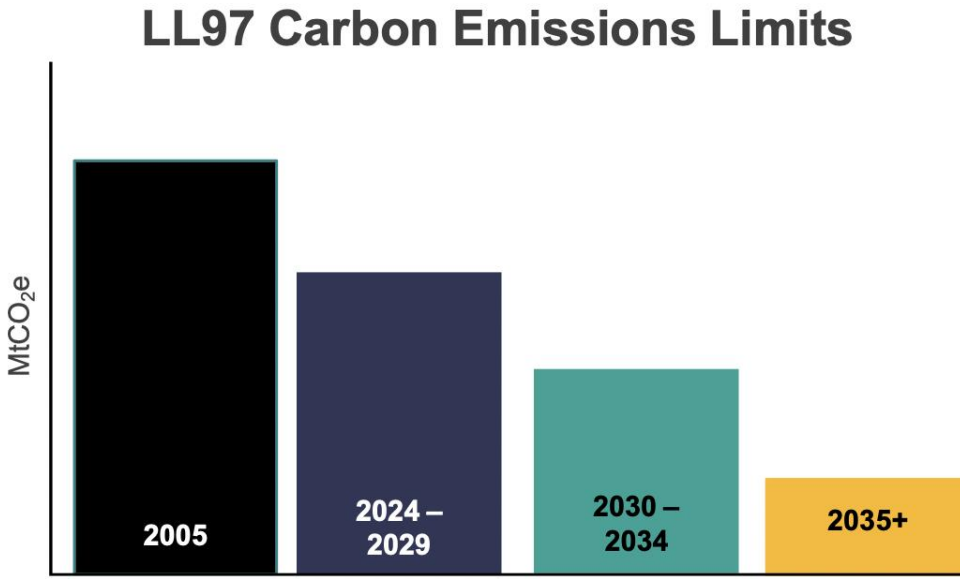
CMA of 2019: Legislative package to limit building emissions

+ Green roof and solar PV mandates (LL92 and LL94)
+ Energy Efficiency Grade (LL33/LL95)
+ PACE, clean energy financing tools (LL96)
+ Carbon Emissions Intensity Limits (LL97)
  (≥25,000 gross square feet)

Local Law 97 (LL97)

- **Market Rate buildings >25,000 square feet** will meet ambitious carbon reduction targets
  - First carbon emissions limit will be applied in 2024-2029
  - Second carbon emissions limit will be applied in 2030-2034
  - Lower limits will follow in 2035 and beyond to reach 80% reduction by 2050

  Under existing conditions:
  - 75%-80% of properties meet 2024-2029 LL97 limits
  - 25%-30% of properties meet 2030-2034 LL97 limits
- **Affordable Housing buildings >25,000 square feet** have varying requirements
  - Meet LL97 emission limits within a defined timeframe OR
  - Implement Prescriptive Energy Conservation Measures ("Prescriptive Path")



This visual is a conceptual aid and does not represent actual emissions caps established under LL97.

NYC ACCELERATOR

LL97 Implementation Costs

- Building owners must comply with annual GHG limit
  - Exceeding carbon emissions limit: $268 * metric tons CO2e over limit, paid annually until compliant
  - Calculate LL97 penalties at https://be-exchange.org/ll97-calculator/
- Of buildings over their 2024 target, approximately:
  - 92% have penalties below $100,000
  - 80% are below $50,000
  - 65% are below $25,000
  - 44% are below $10,000

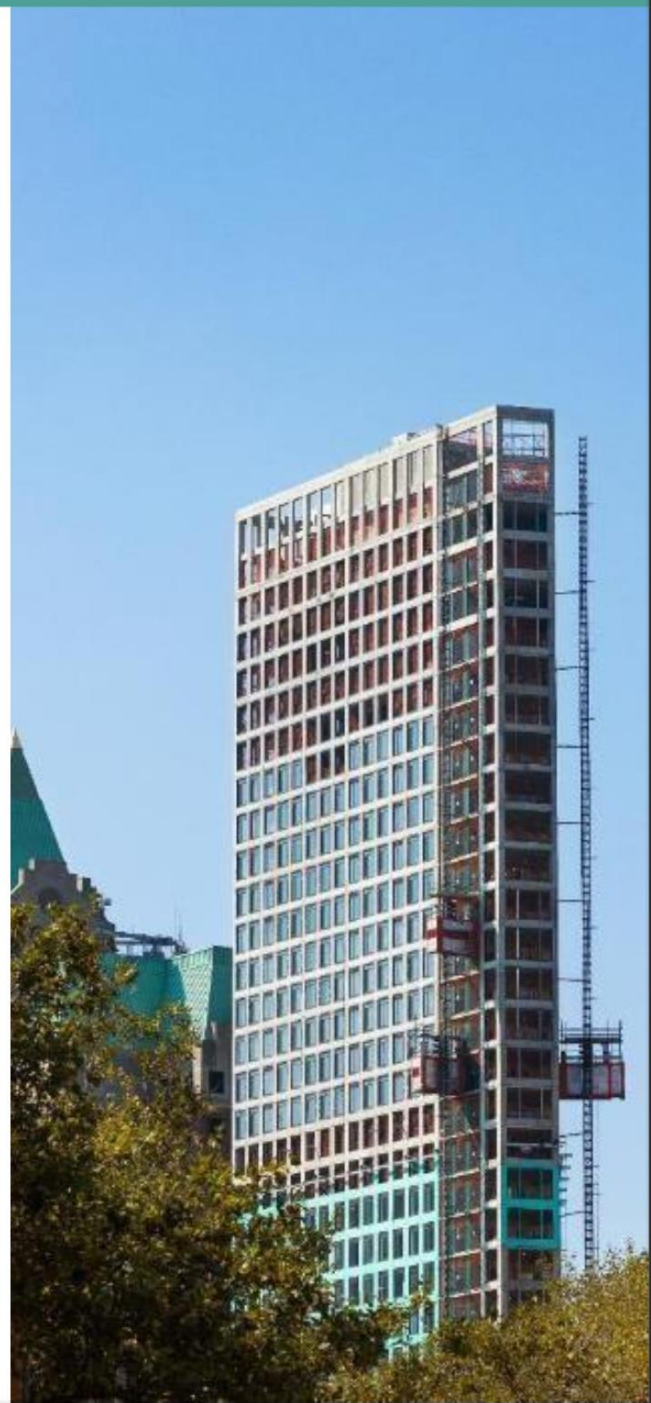
What is NYC Accelerator?

- A New York City program to help control costs, meet compliance requirements for local laws, boost building performance, increase energy savings, and reduce carbon emissions across New York City buildings. NYC Accelerator:
  - Provides free technical guidance to help the market transform how our buildings operate and are built
  - Identifies building upgrade projects to help meet emissions limits established under the Climate Mobilization Act and other local building energy laws
  - Offers no-cost building operator trainings and supports green workforce development
  - Connects building decisionmakers directly with service providers to implement decarbonization projects
  - Helps buildings identify applicable financial incentives and financing

NYC ACCELERATOR

How Does NYC Accelerator Work?

- Who is eligible?
  - Any privately owned New York City building ≥5,000 square feet (new or existing)
  - Smaller buildings referred to partner organizations
- How does it work?
  - Call us and get connected with a dedicated Account Manager
  - Receive objective advice customized to your needs
- How much does it cost, and what's the catch?
  - No catch, no cost, no sign-up or commitment



NYC ACCELERATOR

Contact Our Team of Experts

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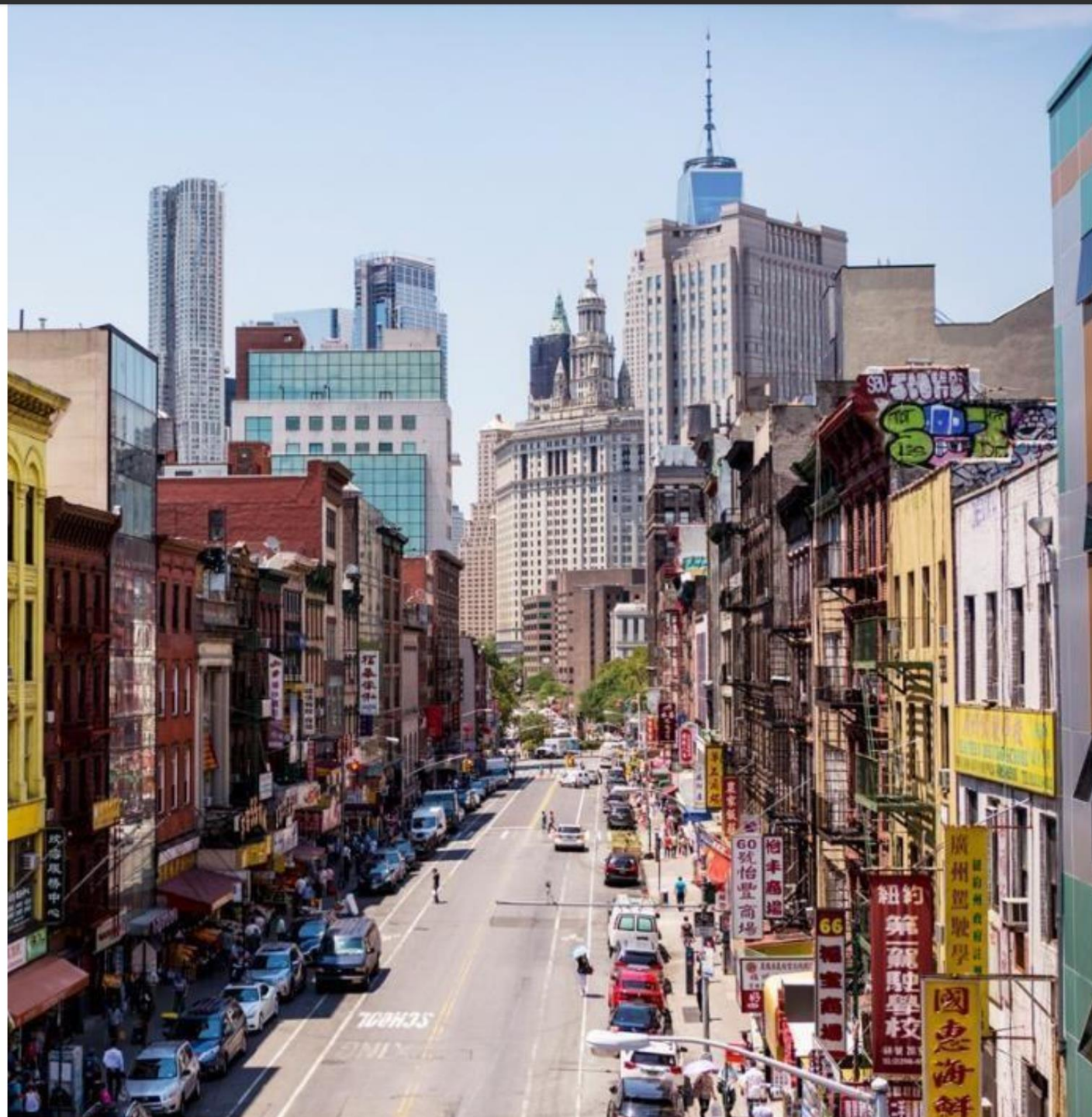


LL97 GHG Emissions Compliance Pathways

- Owner demonstrates compliance with annual GHG limit
  - Accurate gross floor area (GFA) is critical*
  - Starting in 2024 and by May 1 annually, file LL97 Report, certified by a Registered Design Professional*
  - Calculate LL97 annual penalties (LL97 calculator at www.be-exchange.org/calculator)
  - Exceeding carbon emissions limit: $268 * metric tons CO_2e over limit, paid annually until compliant
- **Exception:** If more than 35% rent-regulated units, building owner may choose the Prescriptive Energy Conservation Measures (ECM) Path and *"shall ensure that the following applicable ECMs have been implemented."*
  - *Failure to Report: $0.50/ft^2 per month / False Statement: $500,000*

St. Louis, MO

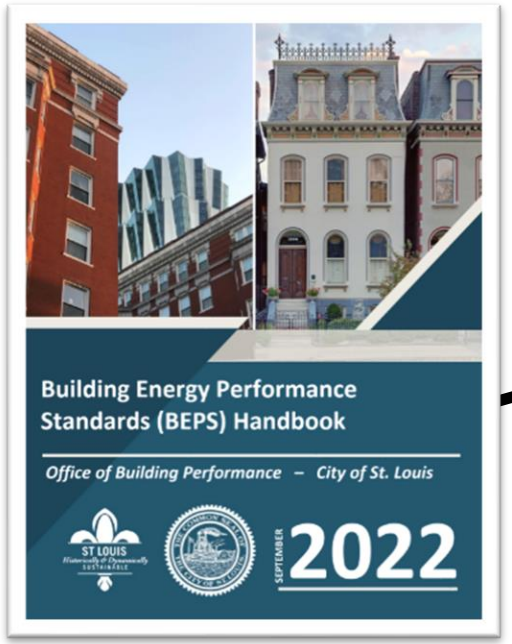
Fannie Mae®

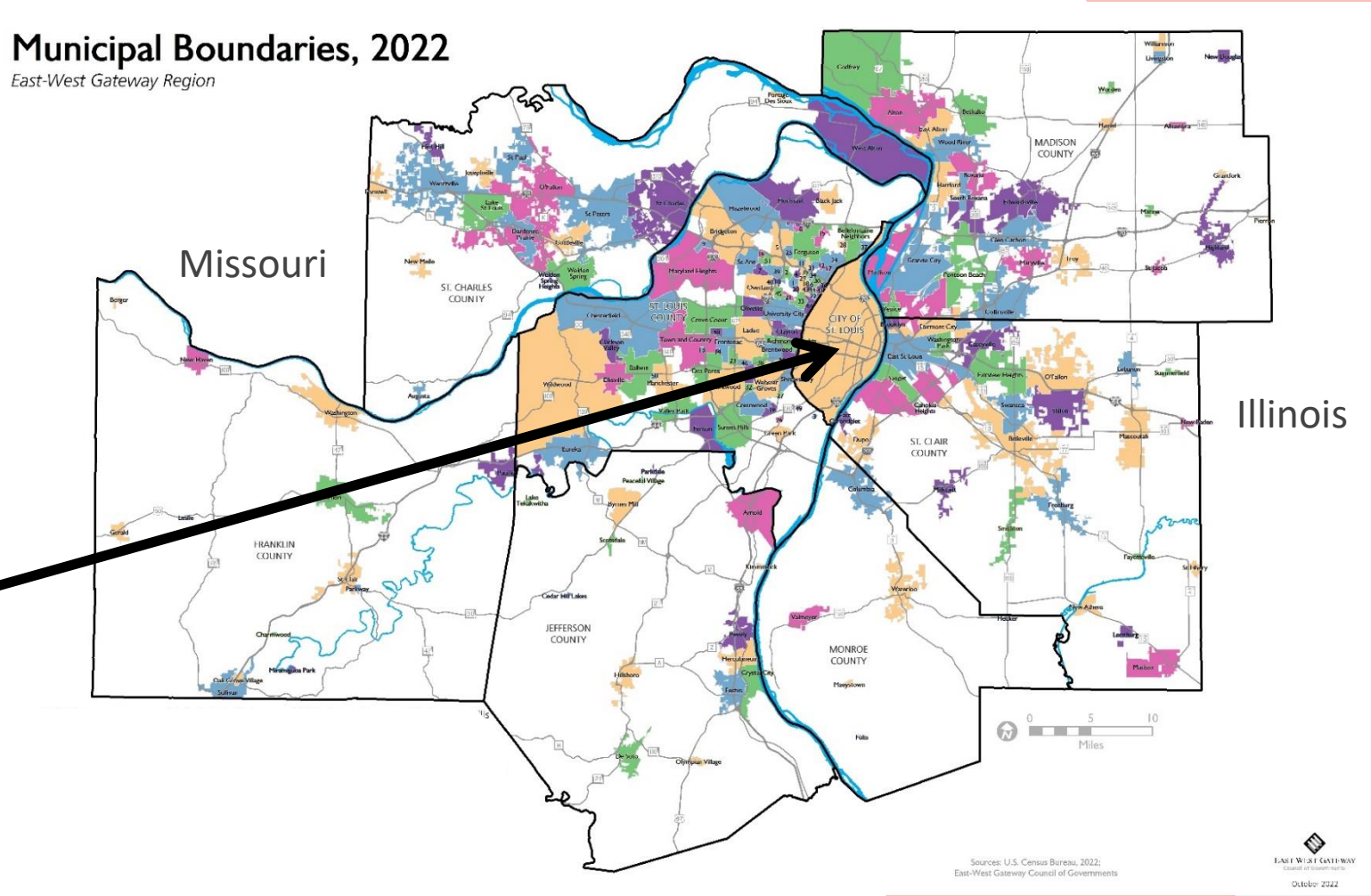
be ex STL

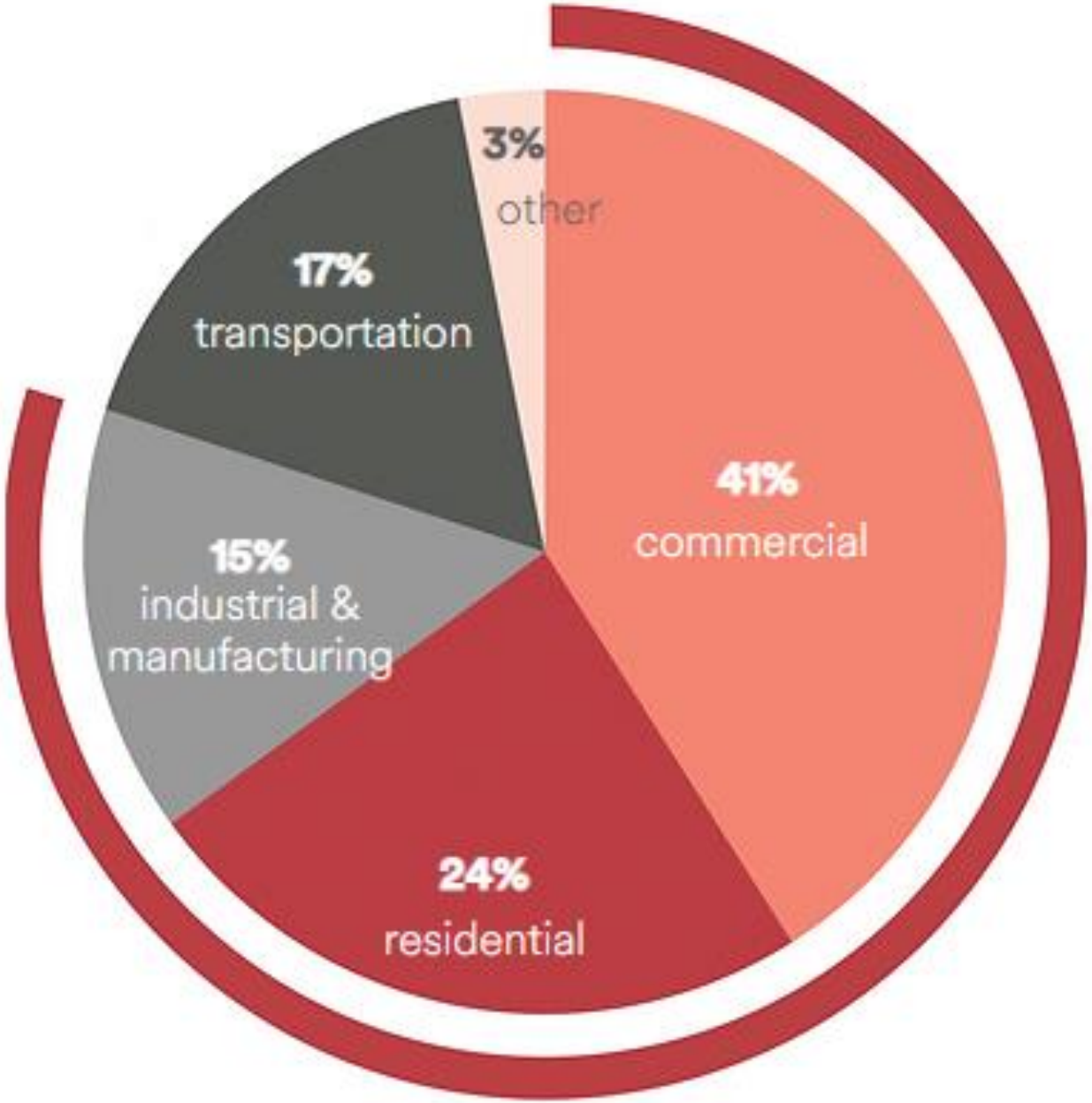
building energy exchange
St. Louis

building performance par+nership

St. Louis Demographics and Policy







80%

of greenhouse gas emissions in the STL metro area come from buildings.

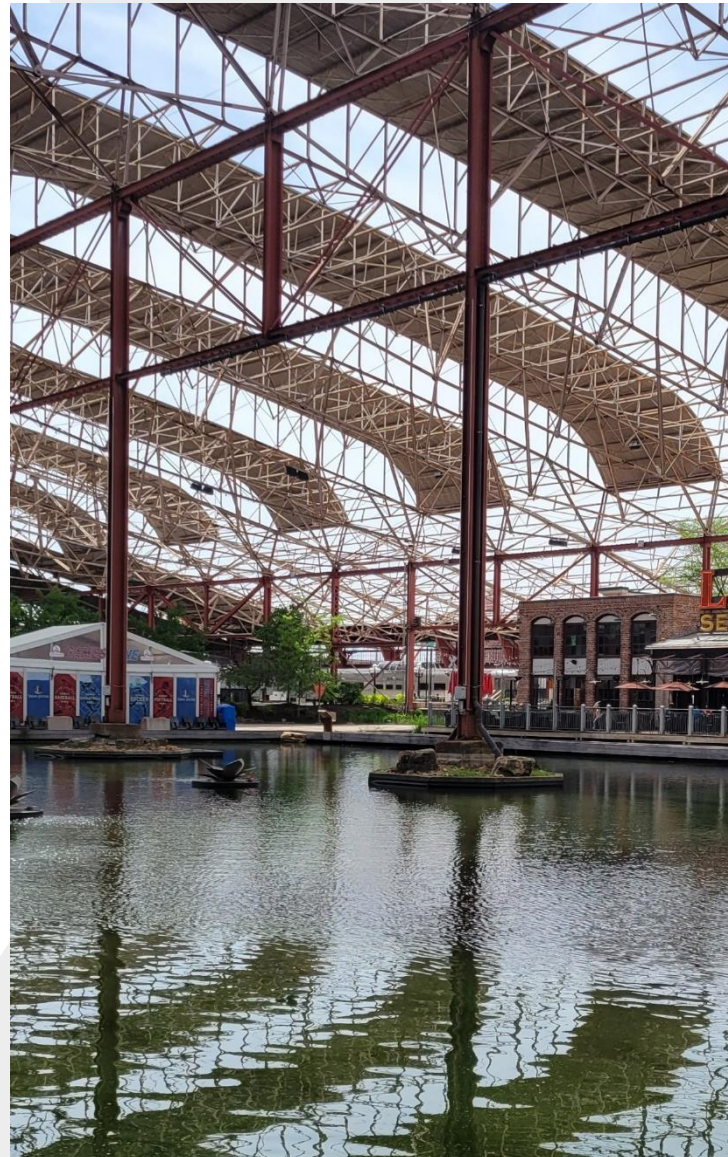
Source: City of St. Louis 2018 GHG Inventory

Building Energy Awareness Ordinance (2017)

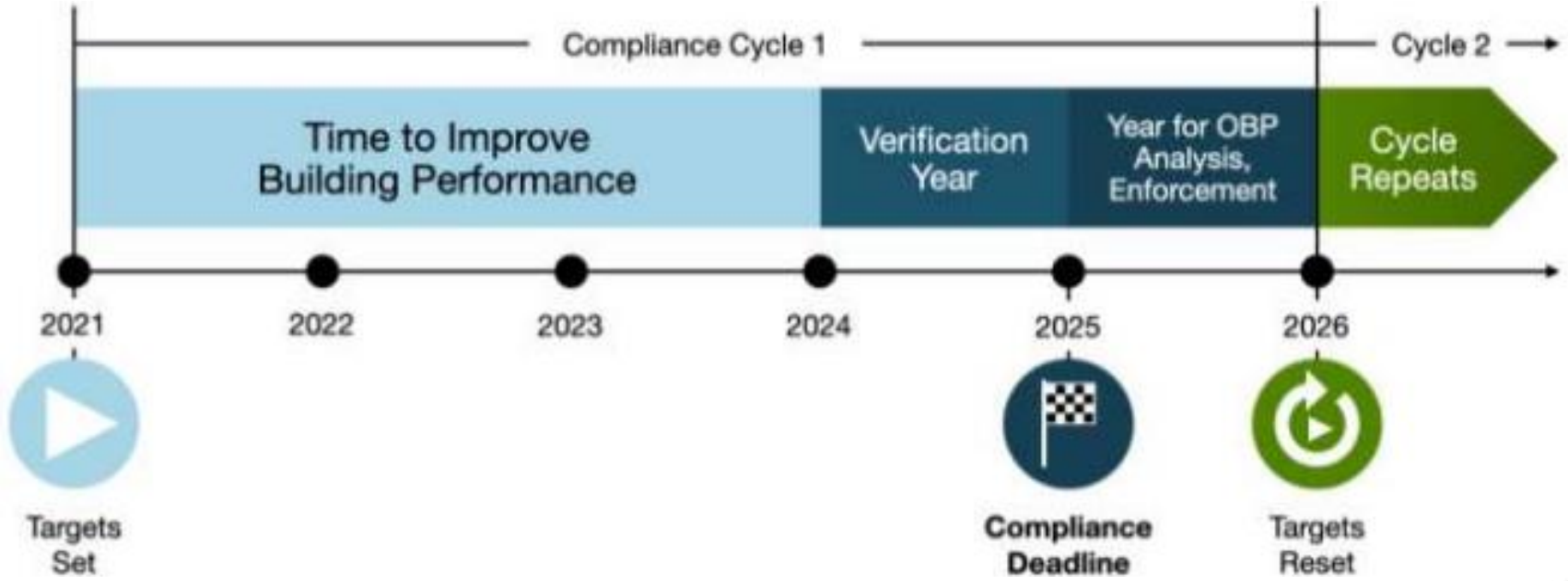
- Municipal and private buildings over 50,000 square feet must track and report energy and water use annually – including multi-family
- Some exemptions (low or no occupancy, manufacturing, financial duress, state & federal buildings)
- Buildings not in compliance with the ordinance *will not* be eligible for new residential or commercial occupancy permits
- *Reporting Deadline is May 1 for previous calendar year's data – Buildings Recently Added to Covered Building list deadline is September 1, 2023*

Building Energy Performance Standard (2020)

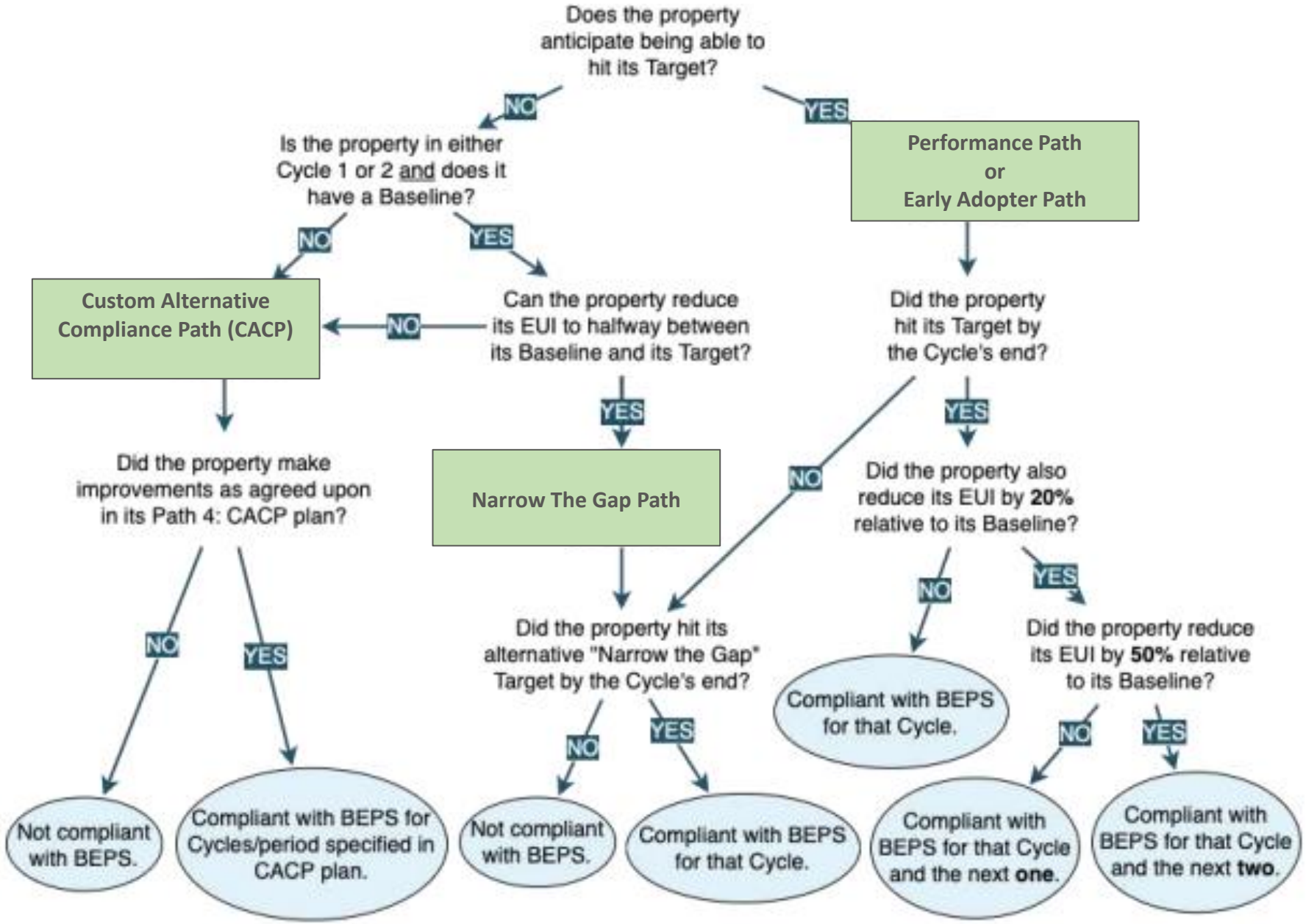
- Set up Building Energy Improvement Board (BEIB)
- Performance metric: Site Energy Use Intensity (EUI)
- Standards are calculated such that at least 65% of buildings have to improve their energy performance.
- Standards finalized in May 2021
- All commercial, institutional, multi-family and municipal buildings that are 50,000 square feet and above must comply.

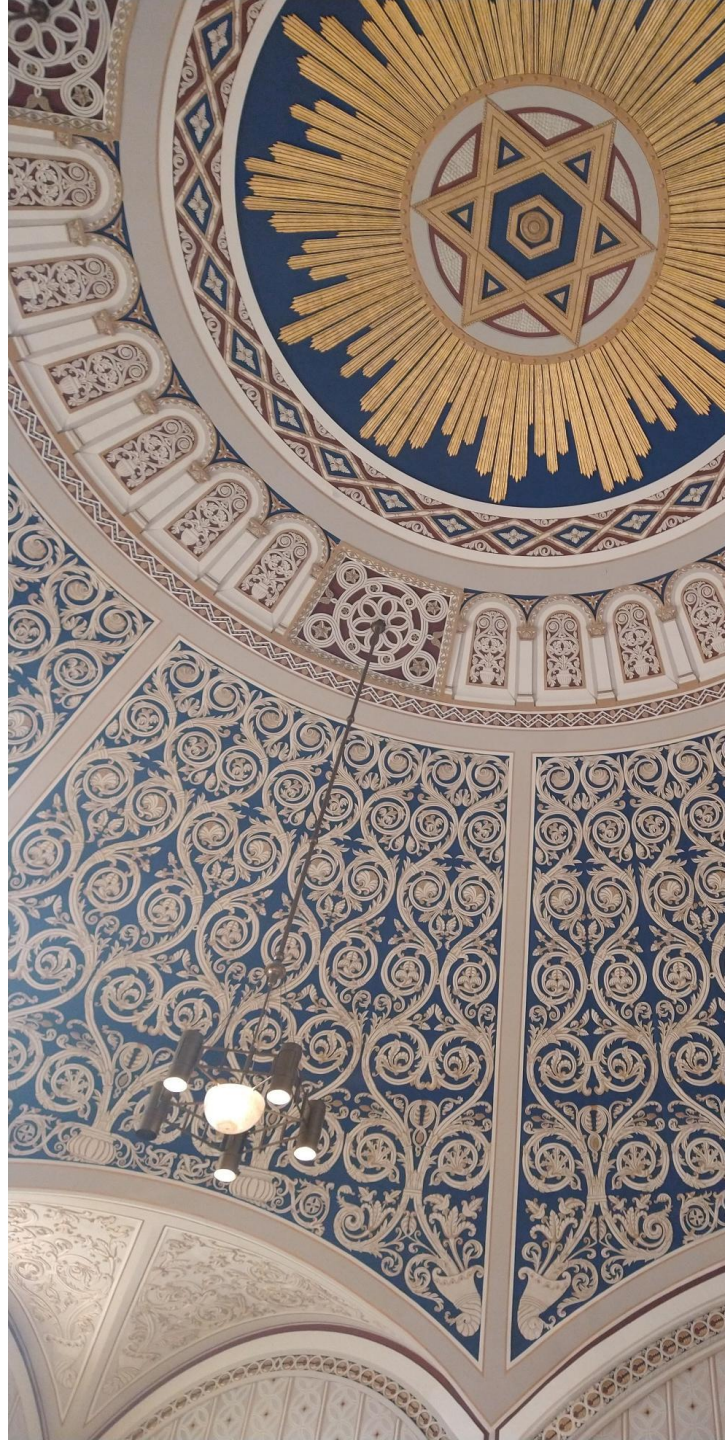


Standard Compliance Cycle

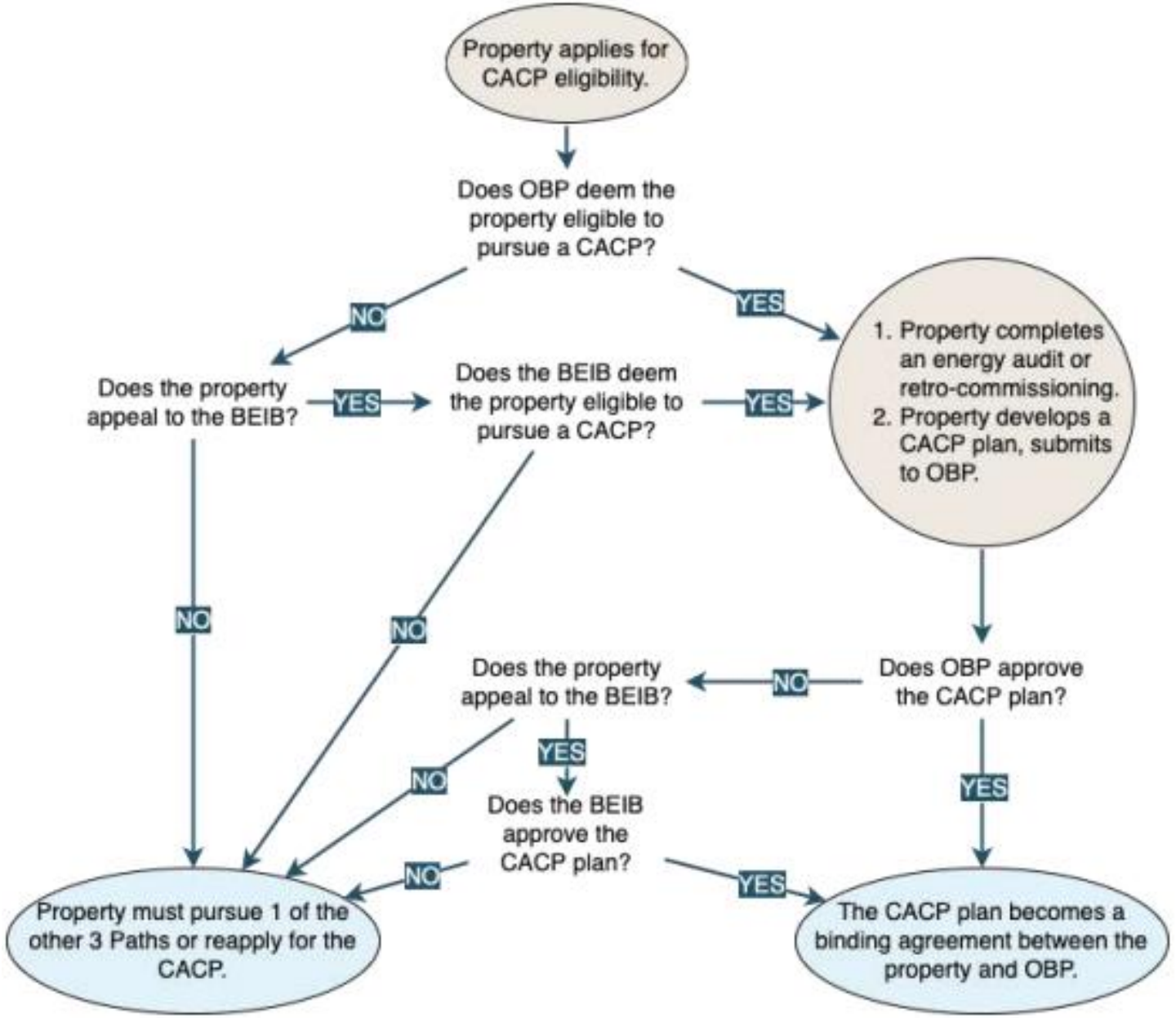


BEPS Pathways





Custom Alternative Compliance Path (CACP)



Provide and Share Resources


tech primer

Roof Insulation

High-performance roof insulation upgrades that improve the building envelope.

be ex STL


Rebate

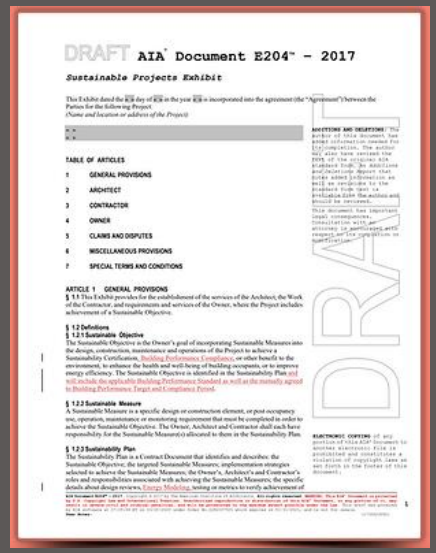
Ameren Missouri / Spire: CommunitySavers Multifamily

Multifamily rebates apply to properties 3 units and larger. Opportunities include HVAC upgrades, EnergyStar Appliances, LED Lighting, Building Insulation. No-cost energy assessment and low or no-cost energy upgrades will be identified.

Building Sector:
Multifamily residential

Energy Type:
Electric, Natural Gas

LEARN MORE >>


DRAFT AIA Document E204™ – 2017

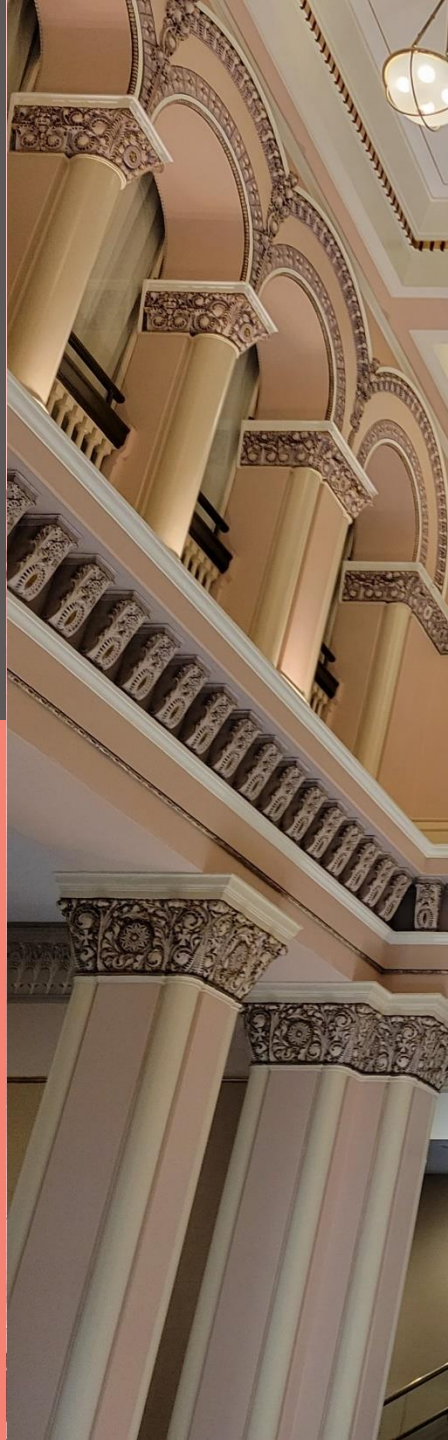
Sustainable Projects Exhibit

TABLE OF ARTICLES

1 GENERAL PROVISIONS
2 ARCHITECT
3 CONTRACTOR
4 OWNER
5 CLAIMS AND DISPUTES
6 MISCELLANEOUS PROVISIONS
7 SPECIAL TERMS AND CONDITIONS

ARTICLE 1 GENERAL PROVISIONS

Support and Host Educational Events



Thank you!

For more information contact us at

info@be-exstl.org

or visit www.be-exstl.org

be ex building energy exchange St. Louis

Q&A

Fannie Mae®

Get Smart on Decarbonization – Optimizing Incentives to Meet Capital Needs

Fannie Mae®

Available incentives to green multifamily properties

Paired with green mortgage financing, property owners can take advantage of federal incentives and state and local programs to make improvements to decarbonize their properties.

- With $369 billion in funding, the **Inflation Reduction Act (IRA)** of 2022 marks the single largest investment in climate and energy in American history, and you can use these incentives for projects at your multifamily properties.
- **Utilities and State Energy Offices** also offer efficiency programs that provide both residential and commercial customers with no-cost/low-cost products, services, or other incentives to improve the efficiency of their buildings.

*This policy summary was completed by Bright Power.

Inflation Reduction Act (IRA)

For multifamily buildings, the IRA includes tax credits, tax deductions, and rebates to help offset the cost of building retrofits, particularly for electrification of heating and hot water systems.

Incentives can differ based on whether a heating or hot water system is centralized or in-unit, as some rebates are offered on a per-equipment basis. Additionally, affordable properties may be eligible for even higher rebate amounts

Fannie Mae worked with Bright Power to develop case studies to show how Borrowers can potentially reduce electrification project costs up to 84% by leveraging these incentives.

*This policy summary was completed by Bright Power.

Case Study – Central Heating and Hot Water Systems

This Property is a 100-unit, 100,000 square foot market rate property with central heating and hot water systems. The Property Owner wants to install a central heat pump heating system and hot water system for a total of $1.3 million.

Through the IRA, the Borrower can take advantage of a **$50,000 tax credit**, a **$20,000 tax deduction**, and a **$4,000 per unit rebate** through the Home Efficiency Rebate program to **reduce their total net project costs to $830,000 – saving 36%.**

If the Property is affordable, the Borrower could take advantage of the same tax credit and tax deduction and **the Home Efficiency Rebate doubles to $8,000 per unit – bringing their total net project costs to $430,000 and saving 67%.**

*This policy summary and case study was completed by Bright Power.

Central Heat and Hot Water Project	
Heat Pump Heating	$800,000
Heat Pump Hot Water	$500,000
Total Project Cost	**$1.3 million**

IRA Benefits	**Market Rate**	**Affordable**
IRA Tax Credit	$50,000	$50,000
IRA Tax Deduction**	$20,000	$20,000
Home Efficiency Rebate	$400,000	$800,000
Total IRA Benefits	**$470,000**	**$870,000**
Net Project Savings	**36%**	**67%**

State & Local Programs

How to use utility energy efficiency programs with Green Rewards

Engage

Contact your Fannie Mae DUS® lender and ask for Green Rewards.

Your DUS lender will schedule a High Performance Building (HPB) assessment with an HPB consultant.

Research

Research multifamily utility and state energy efficiency programs in your area.

Find incentive programs in your area:

a. Local utility website.
b. State Energy Office website (find your state's energy office here).
c. ENERGY STAR directory.
d. Database for State Incentives for Renewable Energy (DSIRE).

Integrate and discuss

Share a list of incentives with your lender and HPB consultant.

Work with your lender to request that the HPB consultant incorporate measures you are interested in pursuing into the HPB Report.

- Provide the HPB consultant the details for the selected incentive program. They may need to incorporate specific efficiency levels required by the program into the HPB Report.
- Review the HPB Report produced by the HPB consultant, which details recommended energy and water efficiency measures.

Evaluate and select

Review the HPB Report with your lender and select the efficiency improvements.

- Factor incentives into the anticipated cost of upgrades to determine the expected cost of improvements after incentives.
- If you are planning to leverage incentives from a comprehensive whole-building program, ensure that the set of measures selected meets the whole-building savings requirements (in addition to Fannie Mae's Green Rewards savings thresholds).
- Your lender will escrow the full cost of selected measures, including any portion that ultimately will be covered by efficiency incentives.

Install and save

After the loan closes, purchase and install efficiency measures in coordination with the incentive program.

- Complete all improvements within 12 months of loan origination to comply with Green Rewards requirements.
- Submit necessary paperwork to the incentive program and receive rebates or arrange with the incentive program for a direct install, as applicable.
- Once measures are installed and confirmed by the lender, funds held in escrow are released.

Greater Savings, Lower Costs: Enhancing Green Rewards with Utility Incentive Programs
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Fannie Mae

See: White Paper – Leveraging Utility Energy Efficiency Incentive Programs

Energy efficiency incentives are operated generally by electric and natural gas utility providers, SEOs, or separate authorities created for this purpose.

Types of Incentive Programs
Direct-install programs
Prescriptive incentives
Comprehensive whole-building programs
Performance-based incentives
Low-income multifamily (LIMF) programs

Green Rewards Requirements and Benefits

Properties making energy and water saving improvements at refinance, acquisition or supplemental financing.

- Financial benefits:
  - **Preferential Green pricing reduces the interest rate of most loans**
  - Fannie Mae reimburses 100% of cost of High Performance Building (HPB) Report.
  - Up to 5% additional loan proceeds, subject to normal LTV constraints.
- No minimum property age or improvement budget.
- Cost of improvements escrowed at 125%; must be completed within 12 months.

2023 Eligibility

30% energy + water savings combined, including a minimum energy savings of at least 15%.

High Performance Building (HPB) Report

HPB Report identifies and quantifies energy and water saving opportunities

- Borrower selects final scope of work from list of energy- and water-saving opportunities in HPB Report
- Report is ordered by Lender, completed by an energy auditor, and requires a site visit
- Report can be completed up to 6 months prior to rate lock
- 100% of HPB Report cost is reimbursed by Fannie Mae

Sample Improvement Opportunities 250 unit, $10 million loan	Estimated Project Cost	Energy Savings	Water Savings	Projected Owner Annual Cost Savings	Projected Tenant Annual Cost Savings
27 kW Solar Photovoltaic System	$65,000	6%	-	$6,000	$3,000
WaterSense Low-flow Bathroom Faucets & Showerheads	$15,000	4%	14%	$18,000	
ENERGY STAR® Smart Thermostats	$50,000	4%	-		$4,000
ENERGY STAR® rated dishwashers	$144,000	3%	2%	$2,000	$3,000
Total	**$274,000**	**17%**	**16%**	**$26,000**	**$10,000**

Escrow at 125%

Save at least 30% energy and water combined, with at least 15% energy savings to be eligible

Underwrite a portion of projected savings

Green Rewards Extra Loan Proceeds

Underwrite a portion of projected cost savings to increase loan amount.

- Net Cash Flow may be increased by underwriting a portion of projected energy and water cost savings:
  - 75% of Owner projected savings
  - 25% of Tenant projected savings, if based on actual (not modeled) tenant data
- Up to 5% additional loan proceeds available, subject to normal LTV constraints.
- Underwriting of greater than 5% additional loan proceeds subject to Credit Pre-Review.

	Standard Loan	Green Loan
Net Cash Flow	$805,000	$805,000
75% of Projected Owner Energy and Water Cost Savings + 25% of Projected Tenant Energy and Water Cost Savings	-	$22,000
Underwritten Net Cash Flow	$805,000	$827,000
Maximum Loan Amount	$10,000,000	$10,275,000
LTV	71%	73%
DSCR	1.25	1.25
Green Rewards Additional Loan Proceeds		**$275,000**

Polling Question

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Q&A

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