
Building Energy Policy Updates

January 13, 2022

OUR MISSION

Green Building United Fosters transformative impact in our communities through green building education and advocacy.

OUR VISION

A sustainable, healthy, and resilient built environment for all.



WE THE PEOPLE
LIKE BUSH

WEST VALLEY FORGE
EXIT 76

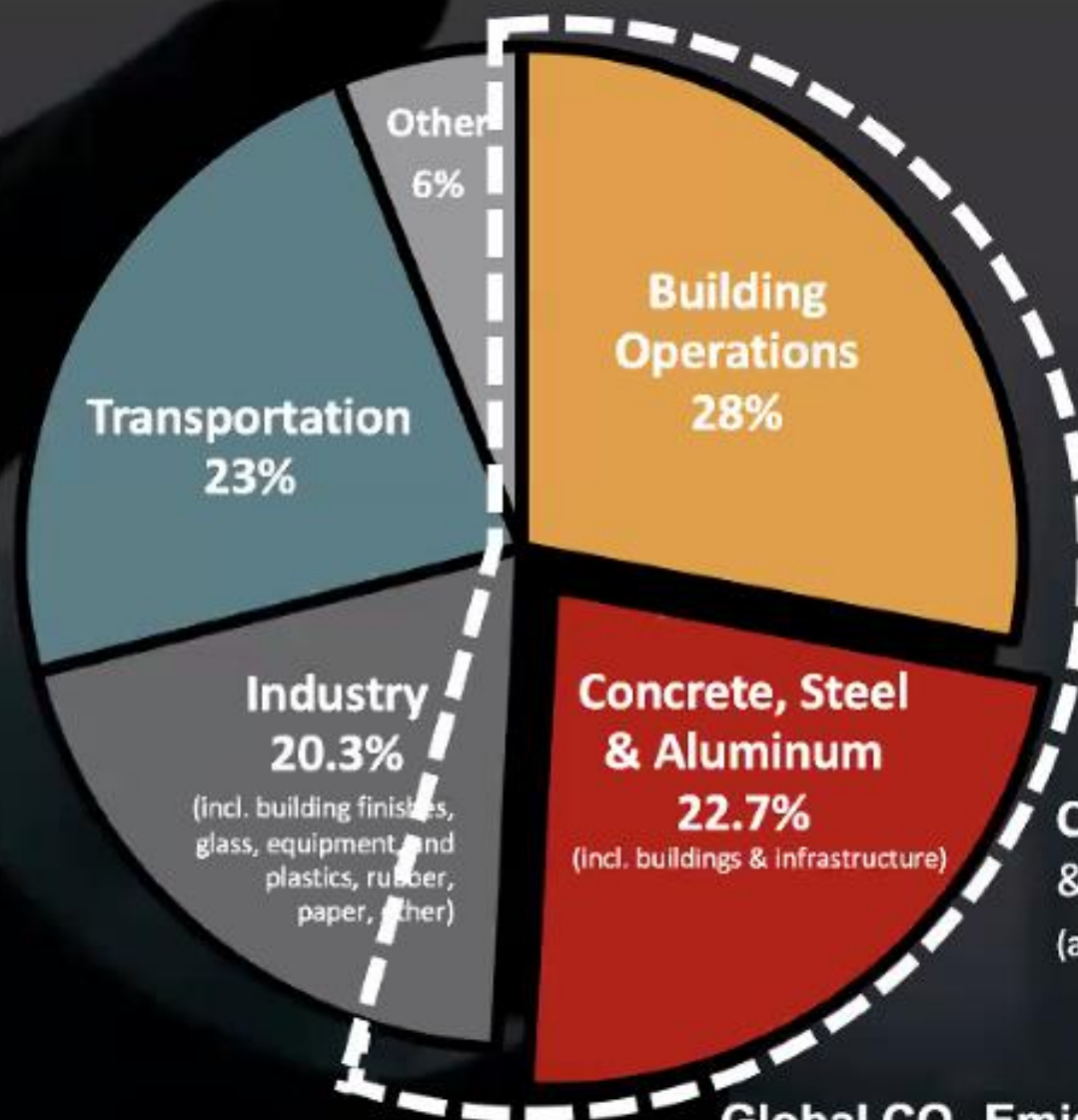
EAST
EXIT 76
INT'L AIRPORT

WEST 30 WEST
Valley Forge

EXIT 76 EAST
Int'l Airport
EXIT ONLY

EXIT

EXIT



Built Environment

(approximate)

**Concrete 11.1%, Steel 10.1%
& Aluminum 1.5%**

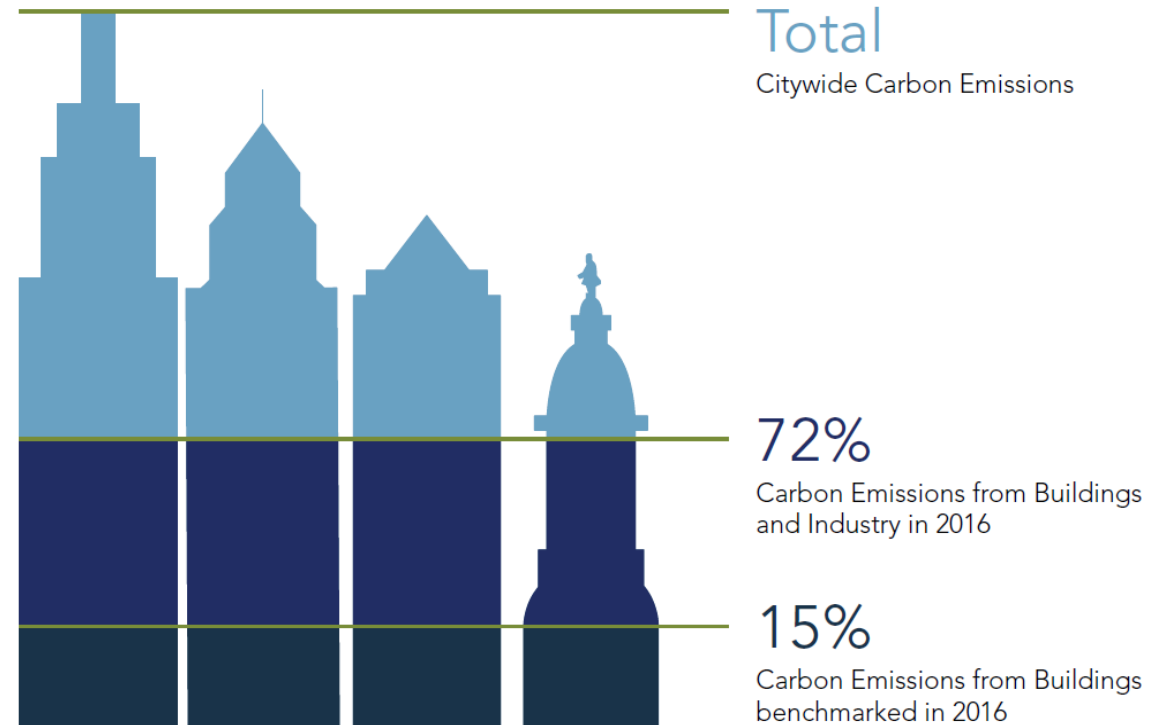
(approximate, 2017)

Global CO₂ Emissions by Sector

Source: IEA, Global ABC, Architecture 2030

Energy use in our built environment accounts for 72% of the City's carbon emissions.

Carbon Emissions of Philadelphia's Benchmarked Buildings



COMMITMENTS

PA - Reduce GHG emissions 80% by 2050

PHL - Achieve carbon neutrality by 2050

WHAT TO WATCH: PA

- **RGGI (Regulation 7-559)** – Enables PA’s participation in the Regional Greenhouse Gas Initiative, a CO2 budget trading program.
- **Energy Future Act (SB 979)** – Amendments to the Alternative Energy Portfolio Standards Act to increase % of renewables required to generate energy, adding the Zero Emissions Certificate Program
- **Preemption Bill (HB 1947)** - prevent municipalities from enacting ordinances that prohibit the use of natural gas as a utility.
- **C-PACE (HB 1760)** – Expands the existing C-PACE program to fund multifamily buildings, indoor air quality projects, and resiliency

POLICY UPDATES: PHL

2012
&
2015

Building Energy Benchmarking Policy

For: all commercial and multi-family housing
buildings > 50,000 square feet

Action: Measure and report energy
performance

<https://www.phillybuildingbenchmarking.com/>

2019

Building Energy Performance Policy (BEPP)

For: all commercial buildings > 50,000 square feet

Action: Improve efficiency of existing systems

<https://www.phila.gov/programs/building-energy-performance-program/>



Commissioning & Retro-Commissioning

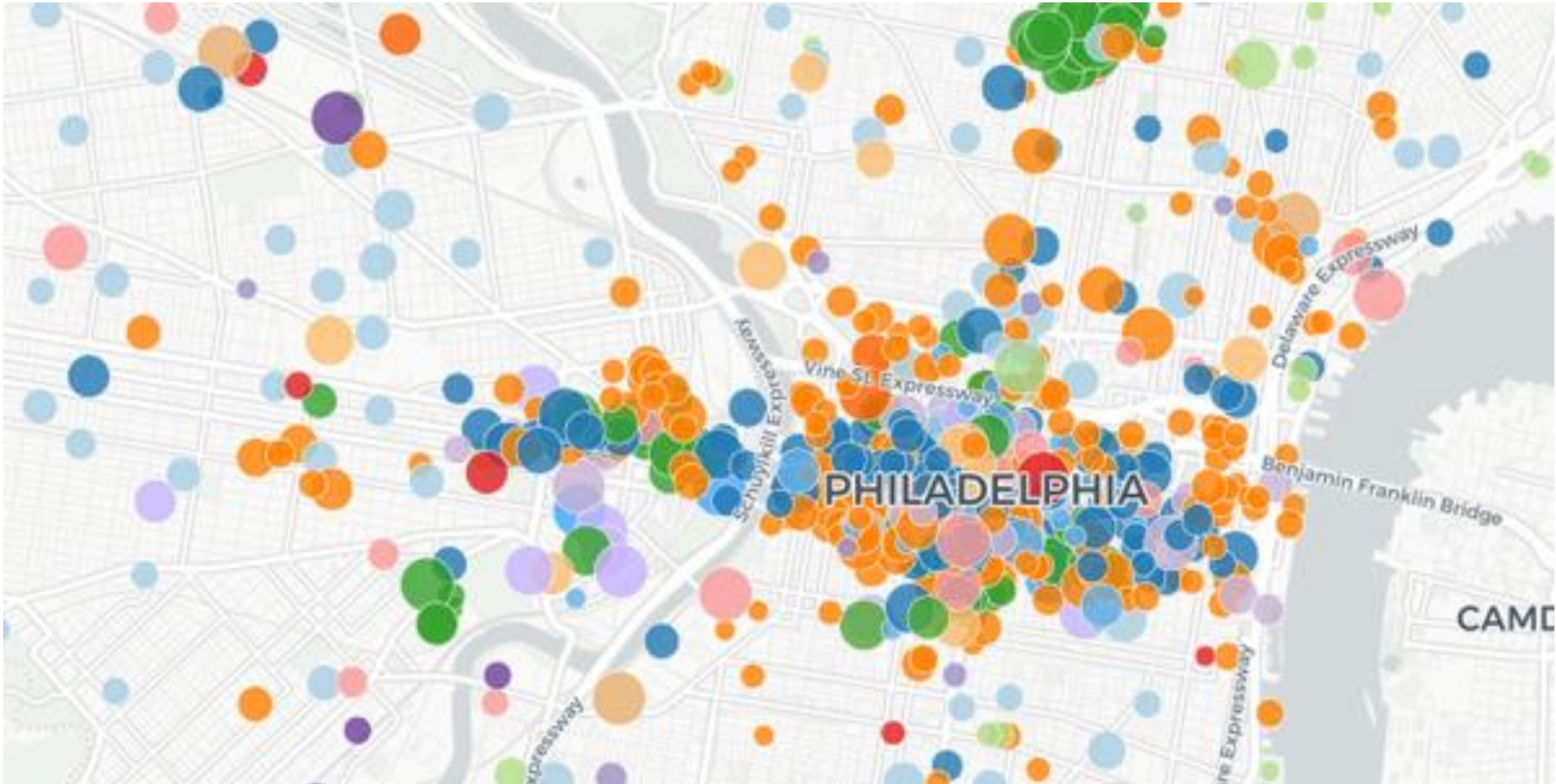
A stack of old, weathered books with a stone block resting on top. The stone block is rectangular and has the word "BENCHMARKING" inscribed on it in a bold, dark blue, sans-serif font. The books are aged and have a yellowish-brown cover. The background is a solid dark blue.

BENCHMARKING

Building Codes

Building Energy Performance Standards

DISCLOSURE



AWARENESS = SAVINGS

NATIONAL SAVINGS

- Buildings that benchmarked over a 3-year time span reduced energy consumption by an average of **2.4% annually.**

D.C.

- Buildings that benchmarked from 2010 to 2012 under the District's ordinance have reduced energy use by **9% on average.**

PHILADELPHIA

- Buildings that benchmarked from 2013 to 2017 under the City's ordinance have reduced energy use by **5%** and carbon emissions **by 10%.**

BUILDING ENERGY PERFORMANCE PROGRAM (BEPP)

KEY CONSIDERATIONS

This is focused on the **operations and maintenance** of a building and its **existing systems**.

This does **not** require capital improvements (unless a building chooses certain compliance options).

Many buildings already operate optimally and/or take efforts to increase energy efficiency, which is why there are **high-performance exemptions**.

This **does not require** a building to meet a specific level of efficiency/energy use in its operations (unless a building chooses certain compliance options).

OOS is available to assist buildings with compliance – would rather see buildings perform better than issue fines.

COMPLIANCE

All non-residential buildings with indoor floor space of at least 50,000 sq. ft.

- Office Buildings
- Municipal buildings
- Retail stores
- Hospitals
- Schools/universities
- Mixed-used buildings
- Temporary lodging (hotels, motels, etc.)
- Industrial and manufacturing facilities

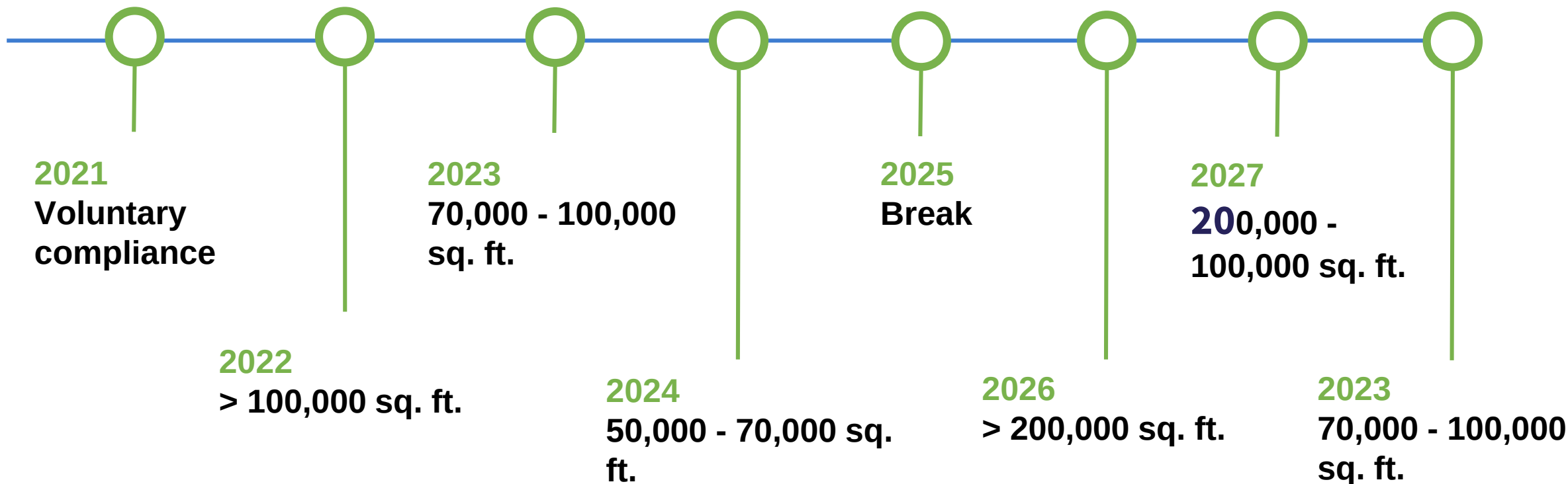
NONCOMPLIANCE

- **\$2,000** fine for violating this policy
- **\$500/day** fine for each day an owner fails to file a report after a 30-day window following the compliance deadline

HOW TO COMPLY

- Identify Compliance Year
- Determine Compliance Pathway
- Engage a Tune-Up Specialist
- Calendar Planning
- Complete Initial Assessment
- Complete Corrective Actions
- Final Assessment and Verification
- Submit to the City

Identify Compliance Year



Buildings must comply every 5 years from their compliance date

Identify Compliance Year

Large Portfolio Planning

Large Portfolio Owner

- 20 or more Covered Buildings or
- any number of Covered Buildings with a total floor area of five million (5,000,000) square feet or more.

Large Portfolio Owners can seek alternative schedule(s) for compliance by submitting a Compliance Plan for review no sooner than 270 days prior to the Compliance Deadline

BUILDING TUNE-UP

STEP 1

ASSESSMENT

Required actions are broken out into 5 sections: Building System Maintenance & Repairs; HVAC Operations and Controls; Lighting System Assessment; Domestic Hot Water and Water Usage; Building Envelope Performed by Tune-Up Specialist

STEP 2

IMPLEMENT CORRECTIVE ACTIONS

Performed by in-house staff or contracted service providers

STEP 3

REASSESSMENT & SUBMISSION

Performed by Tune-Up Specialist

High Performance Pathway Options	Documentation Timelines
Gold rating under USGBC’s LEED for Building Operations & Maintenance v.4	Within 3 years of the Compliance Deadline
Net-Zero Energy Certification	
Participate in and complete a utility retro-commissioning program	
Complete a full retro- or recommissioning procedure, with documentation that building performance was optimized	
Demonstrate energy savings of at least 15%*	
Conduct an energy audit (ASHRAE Level II or stricter) and implement all the no/low-cost EE measures*	
Low Site EUI (less than 20 kBTU/sq ft)	For at least 2 of the 3 preceding calendar years prior to the Compliance Deadline
ENERGY STAR certification (75 or greater)	The year immediately preceding the Compliance Deadline (accepting 2019 certification in ‘21 and ‘22)
Demonstrated continuous commissioning/active optimization*	One year of reports

EXEMPTIONS

- Your building received its initial certificate of occupancy within 3 years of the scheduled tune-up date
- Your building is scheduled to be demolished within one year of the date of the scheduled tune-up
- Such other factors as determined by the OOS to justify an exemption

TIMELINE



TIMELINE



Initial Assessment/Systems Inventory

1st WEEK IN JAN
Alternative compliance plans due

1st WEEK IN APRIL
High performance certifications, alternative exemption / extension requests due

SEP 30
Certified Tune-up reports due

Final Assessment

VOLUNTARY PROGRAM: 2030 DISTRICTS

TRANSLATING DATA INTO ACTION

ACHIEVING DISTRICT-WIDE GOALS

2030 Districts commit to reducing:



BUILDING
ENERGY USE



WATER
CONSUMPTION



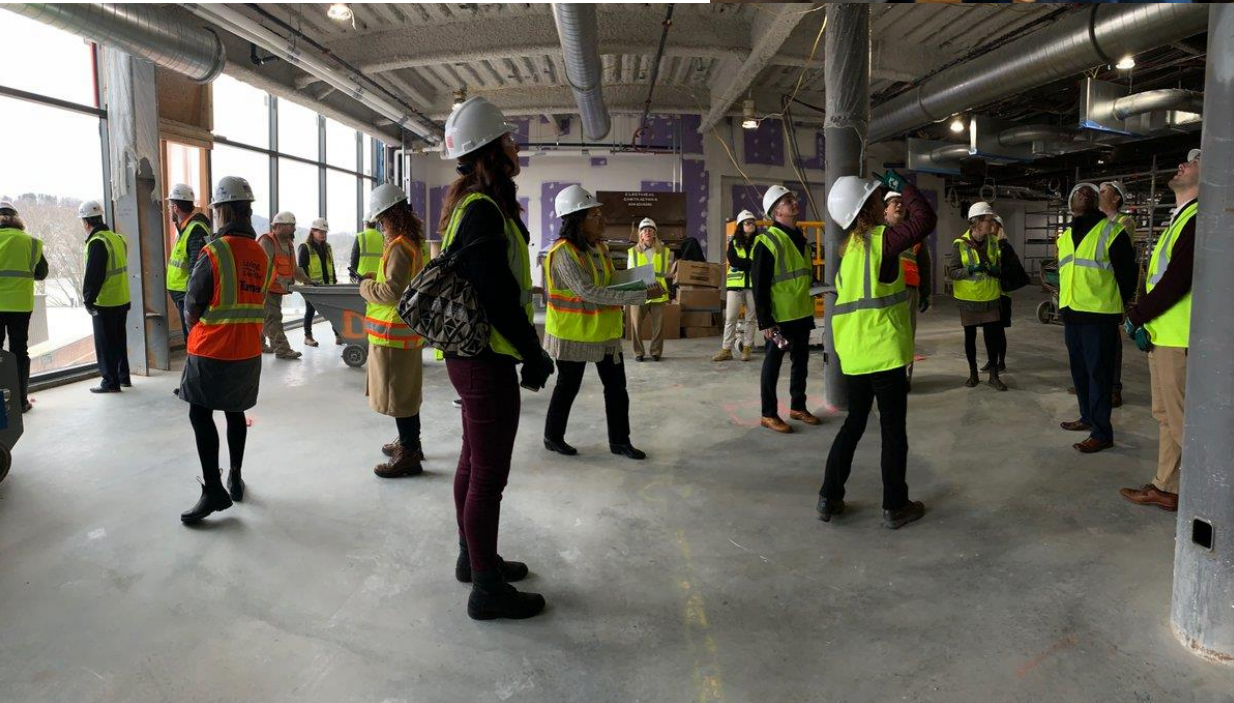
TRANSPORTATION GHG EMISSIONS

50% BY 2030

PHILADELPHIA PROPERTY PARTNERS



GREEN BUILDING UNITED



Thank You!

LeAnne Harvey

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