

THE CITY OF PHILADELPHIA

— OFFICE OF —

SUSTAINABILITY



GREENWORKS  
PHILADELPHIA

**Philadelphia's Built Environment & Energy**  
COG Built Environment And Energy Advisory Committee  
October 20, 2016  
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# GREENWORKS

PHILADELPHIA

## Energy

PHILADELPHIA REDUCES ITS VULNERABILITY TO RISING ENERGY PRICES



## Environment

PHILADELPHIA REDUCES ITS ENVIRONMENTAL FOOTPRINT



## Equity

PHILADELPHIA DELIVERS MORE EQUITABLE ACCESS TO HEALTHY NEIGHBORHOODS



## Economy

PHILADELPHIA CREATES A COMPETITIVE ADVANTAGE FROM SUSTAINABILITY



## Engagement

PHILADELPHIANS UNITE TO BUILD A SUSTAINABLE FUTURE



*5 goals, 15 targets, over 150 initiatives*

# Greenworks Update



## CLEAN ENERGY AND EFFICIENT BUILDINGS

All Philadelphians efficiently use clean energy that they can afford

## What **YOU** Can Do

### INDIVIDUALS

- Make your home as energy efficient as possible and find out how to buy clean energy at [PA-PowerSwitch.com](http://PA-PowerSwitch.com).
- Explore rooftop solar opportunities.
- Consider energy policy in the voting booth.

### NEIGHBORHOODS

- Educate neighbors about energy incentives and resources available to the community.
- Coordinate projects like community solar or block-wide white roof coating.

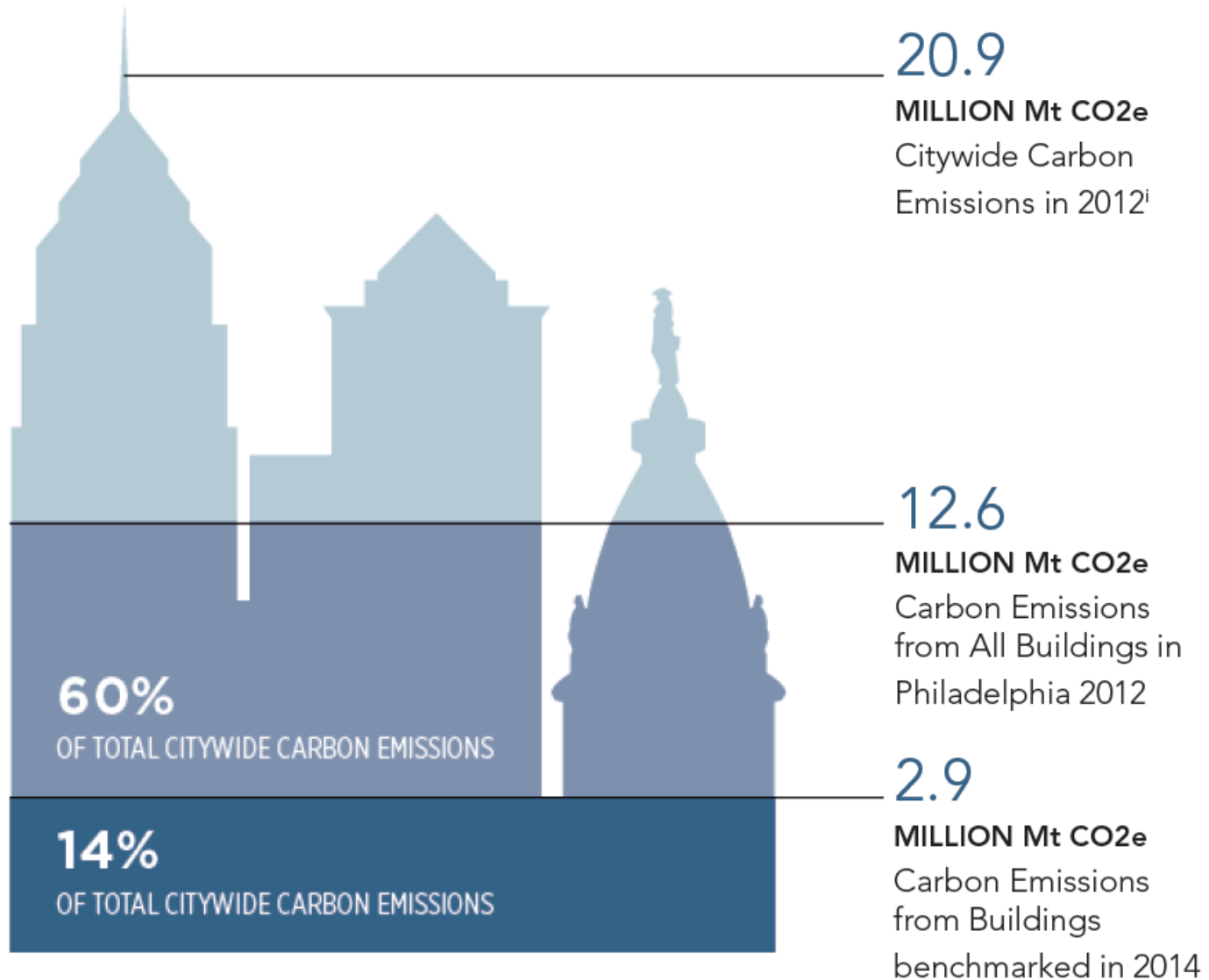
### INSTITUTIONS

- Educate employees and tenants about efficiency opportunities.
- Set organizational greenhouse gas

# Philadelphia's Carbon Emissions and Energy Consumption

	Baseline	Greenworks Target	To Date
<b>Target 1: Lower City Government Energy Consumption by 30 Percent</b>	<b>3.77</b> Trillion BTUs (2008)	<b>2.64</b>	<b>3.93 (2015)</b>
<b>Target 2: Reduce Citywide Building Energy Consumption by 10 Percent</b>	<b>122.06</b> Trillion BTUs (2008)	<b>109.85</b>	<b>140.4 (2015)</b>
<b>Target 5: Reduce Greenhouse Gas Emissions by 20 Percent</b>			
<b>Municipal</b>	<b>477,463</b> Metric Tons CO <sub>2</sub> e Emitted (1990)	<b>477,463</b>	<b>459,831 (2015)</b>
<b>Citywide</b>	<b>21.0</b> Million Metric Tons CO <sub>2</sub> e Emitted (1990)	<b>16.85</b>	<b>19.13 (2014)</b>

# Buildings and Carbon Emissions



# Energy Benchmarking

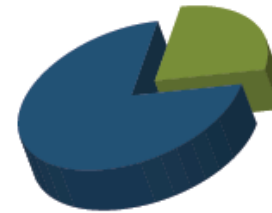


280  
MILLION  
Square feet

1921  
BUILDINGS  
Reported



59  
MEDIAN  
ENERGY STAR  
Score



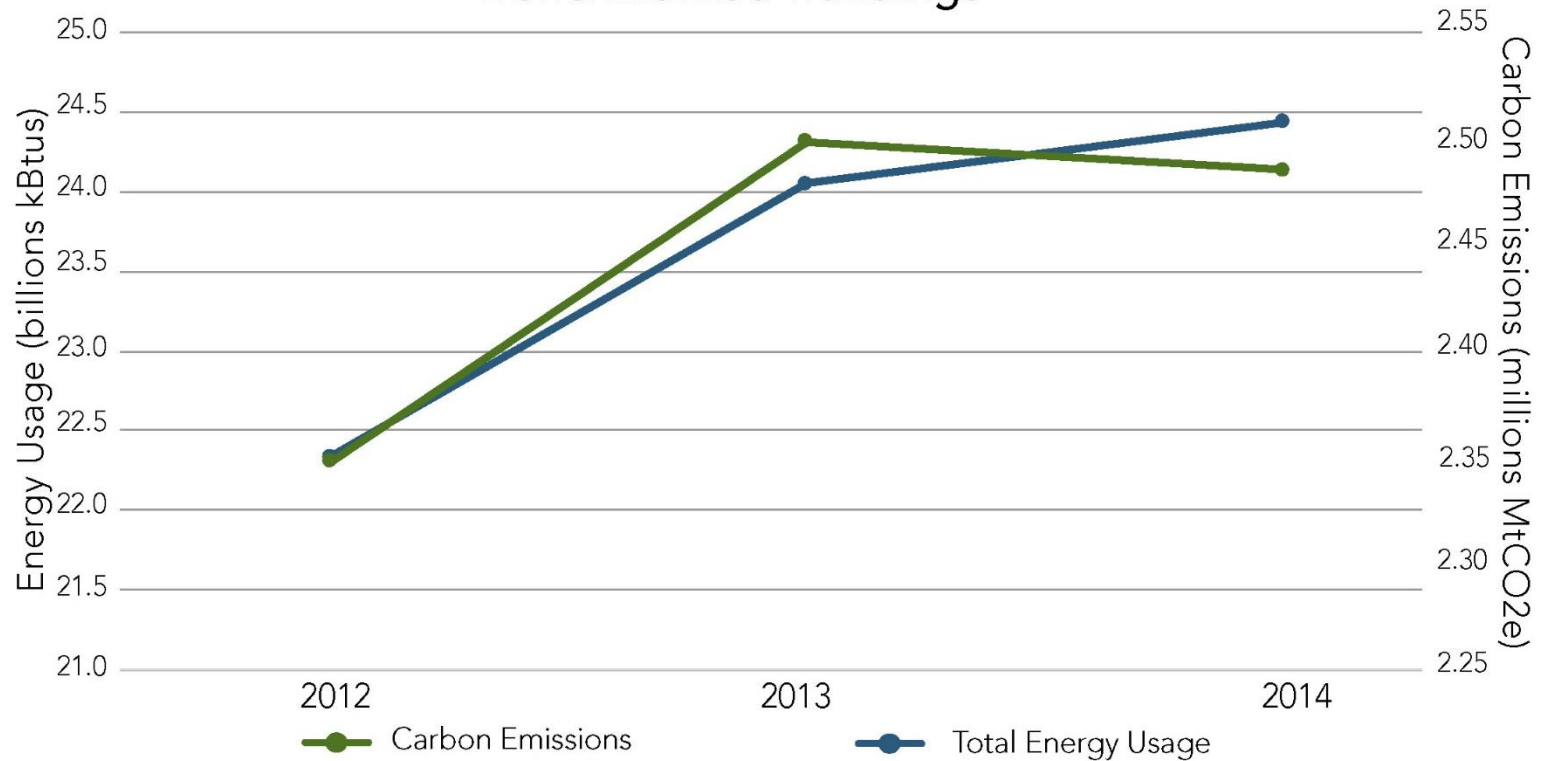
Represents 25%  
of TOTAL Citywide  
square footage

91%  
COMPLIANCE  
Rate



# Energy Benchmarking

## Total Energy Usage Vs. Carbon Emissions Over Time for Benchmarked Buildings



# Energy Benchmarking Program

## Data Visualization Tool

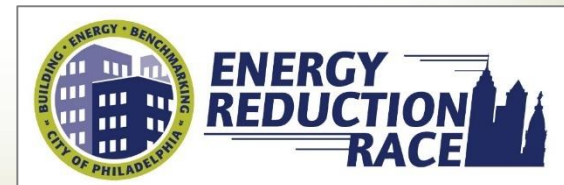
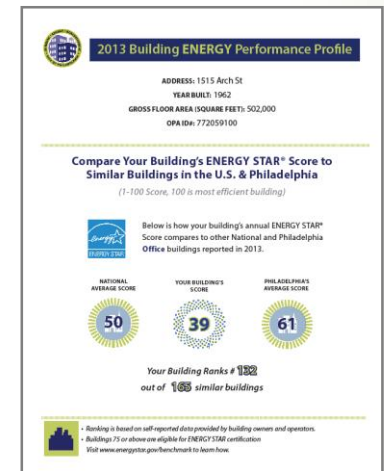
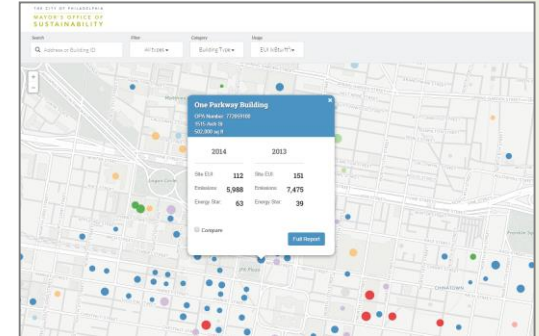
<http://visualization.phillybuildingbenchmarking.com>

## Energy Scorecard

- Energy use intensity/ Energy Score over time
- Estimated cost savings
- Ranked within local sector
- Energy efficiency info

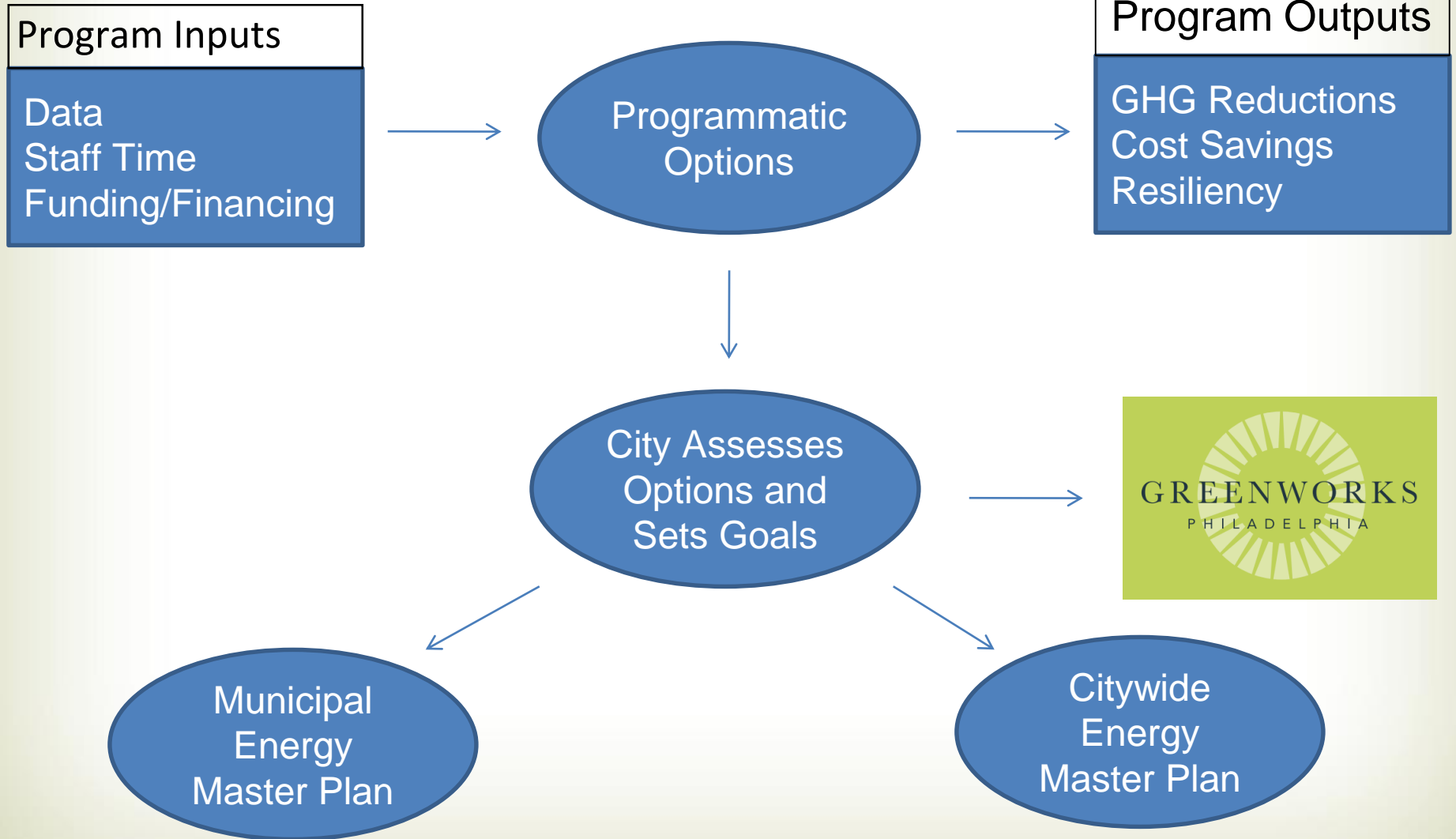
## Building Energy Challenge

- Reduce energy by 5% in one year
- More than 30 buildings
- Free building operator training course
- Saved 70 million kBtus and reduced carbon emission by 11 percent

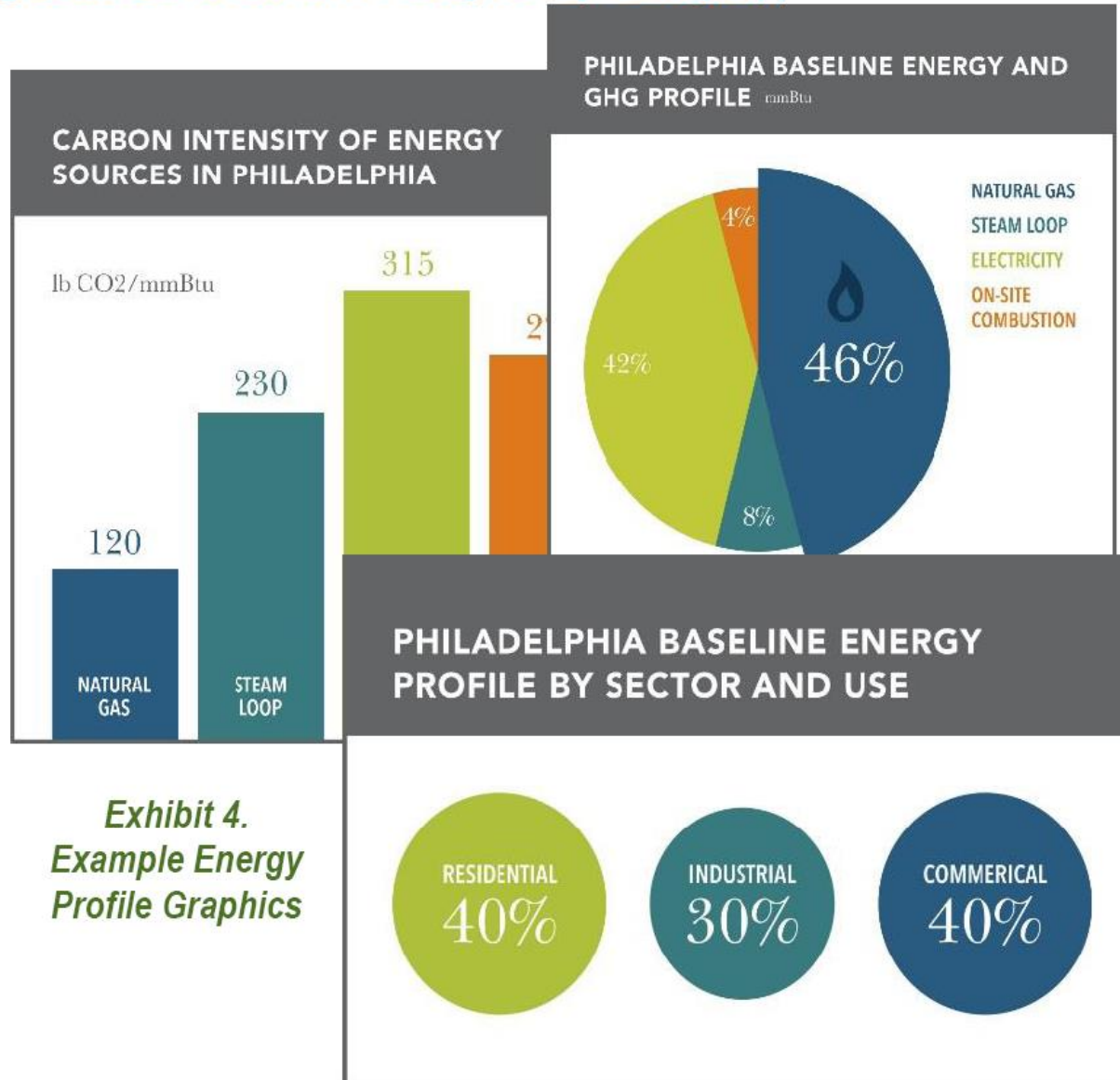




# Energy Master Plan for the Built Environment



# Energy Master Plan for the Built Environment





**Philadelphia Built Environment & Energy**

Office of Sustainability, City of Philadelphia

[www.phila.gov/green](http://www.phila.gov/green)