

#GreenworksPHL



GREENWORKS

A VISION FOR A SUSTAINABLE PHILADELPHIA

**Energy Benchmarking and Citywide Energy
Planning**

ACEEE Symposium on Market Transformation

April 3, 2017



GREENWORKS

A VISION FOR A SUSTAINABLE PHILADELPHIA

CITY OF PHILADELPHIA
OFFICE OF SUSTAINABILITY

MAYOR JIM KENNEY



www.phila.gov/green



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Philadelphia's Office of Sustainability

Greenworks Visions At a Glance

VISION 01



All Philadelphians have access to healthy, affordable, and sustainable food and drinking water

VISION 02



All Philadelphians breathe healthy air inside and outside

VISION 03



All Philadelphians efficiently use clean energy that they can afford

VISION 04



All Philadelphians are prepared for climate change and reduce carbon pollution

VISION 05



Philadelphians benefit from parks, trees, stormwater management, and healthy waterways

VISION 06



All Philadelphians have access to safe, affordable, and low-carbon transportation

VISION 07



All Philadelphians waste less and keep our neighborhoods clean

VISION 08



All Philadelphians benefit from sustainability education, employment, and business opportunities



VISION 03

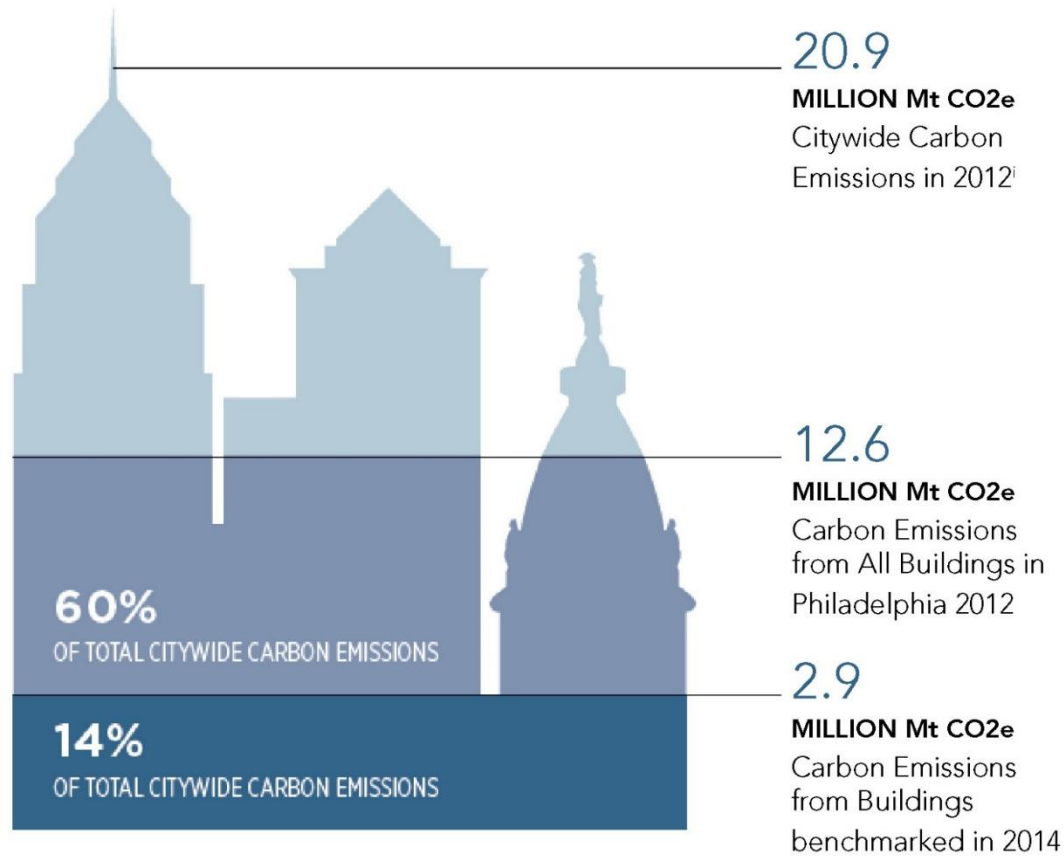
CLEAN AND EFFICIENT ENERGY



All Philadelphians efficiently use clean energy
that they can afford

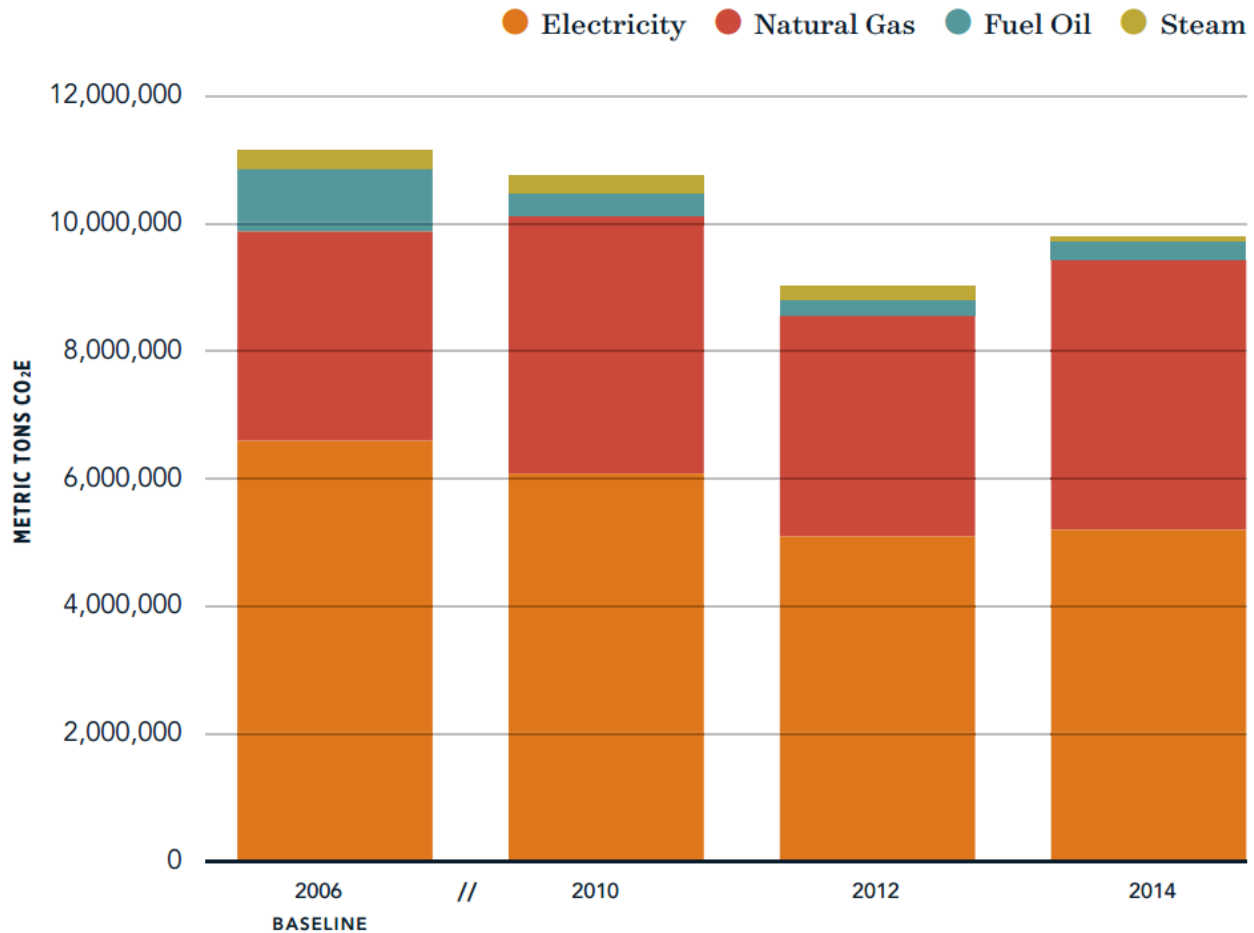


Carbon Emissions of Philadelphia's Benchmarked Buildings





07. CARBON POLLUTION FROM PHILADELPHIA BUILDINGS





	Calories	Platters
Hot Cakes	450	Hot Cakes
Hot Cakes	600	Hot Cakes
Big Breakfast	580	Big Breakfast
Deluxe Breakfast	660	Deluxe Breakfast
Breakfast	560	Breakfast
	570	

Nutrition Facts

Serving Size 1 cup (228g)
Servings per Container 2

Amount Per Serving	Calories from Fat 120	% Daily Value*
Calories 280		
Total Fat 13g		20%
Saturated Fat 5g		25%
Trans Fat 2g		
Cholesterol 2mg		10%
Sodium 660mg		28%
Total Carbohydrate 31g		10%
Dietary Fiber 3g		0%
Sugars 5g		
Protein 5g		
Vitamin A 4%	Vitamin C 2%	
Calcium 15%	Iron 4%	

*Percent Daily Values are based on a 2,000-calorie diet. Your daily values may be higher or lower depending on your calorie needs.

	Calories:	2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Fiber		25g	30g

Calories per gram:
Fat 9 • Carbohydrate 4 • Protein 4

U.S. Government Federal law prohibits removal of this label before consumer purchase.

ENERGYGUIDE

Refrigerator-Freezer
 • Automatic Defrost
 • Side-Mounted Freezer
 • Through-the-Door Ice

XYZ Corporation
Model ABC-L
Capacity: 23 Cubic Feet

Estimated Yearly Operating Cost

\$67

Cost Range of Similar Models: \$57 - \$74

630 kWh
Estimated Yearly Electricity Use

Your cost will depend on your utility rates and use.

- Cost range based only on models of similar capacity with automatic defrost, side-mounted freezer, and through-the-door ice.
- Estimated operating cost based on a 2007 national average electricity cost of 10.65 cents per kWh.
- For more information, visit www.ftc.gov/appliances.

EPA Fuel Economy Estimates

CITY MPG	Estimated Annual Fuel Cost	HIGHWAY MPG
19	\$1,957	31

Expected range for most drivers: 15 to 23 MPG

Estimated Annual Fuel Cost: \$1,957 (based on 15,000 miles at \$3.00 per gallon)

Expected range for most drivers: 25 to 37 MPG

Combined Fuel Economy: **23** MPG

Your actual mileage will vary depending on how you drive and maintain your vehicle.

All Subcompacts

Benchmarking creates standardized metrics to measure and compare energy performance between similar buildings



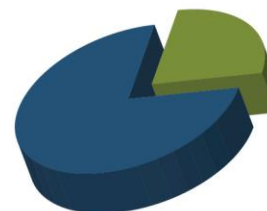


393
MILLION Square feet
(Commercial and Residential)

2900
BUILDINGS
Reported

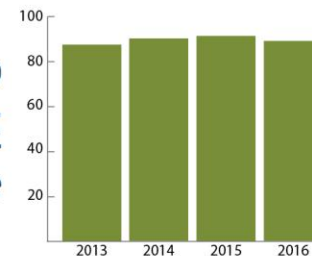


61
MEDIAN
ENERGY STAR
Score



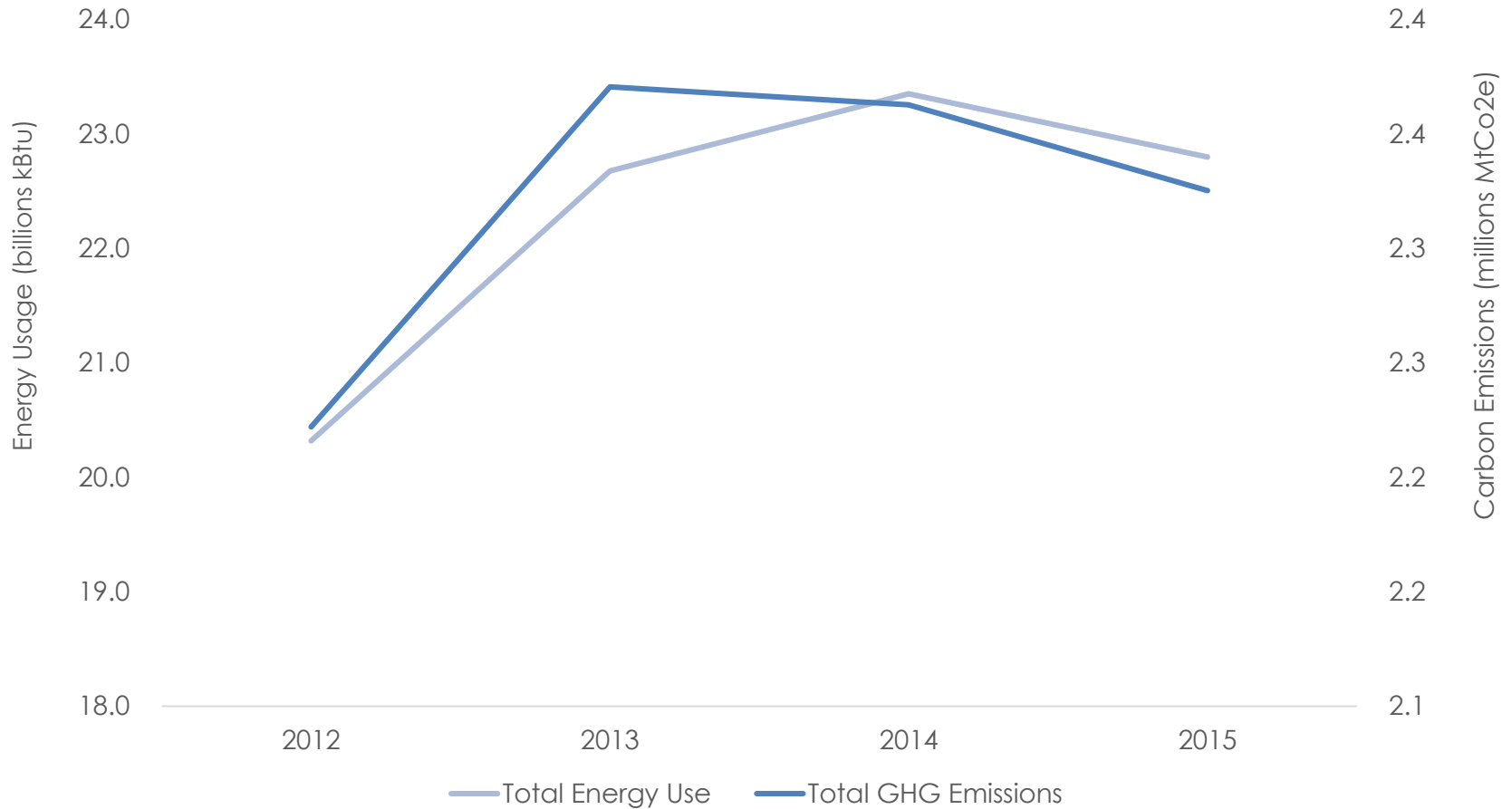
Represents **35%**
of TOTAL Citywide
square footage

88%
COMPLIANCE
Rate



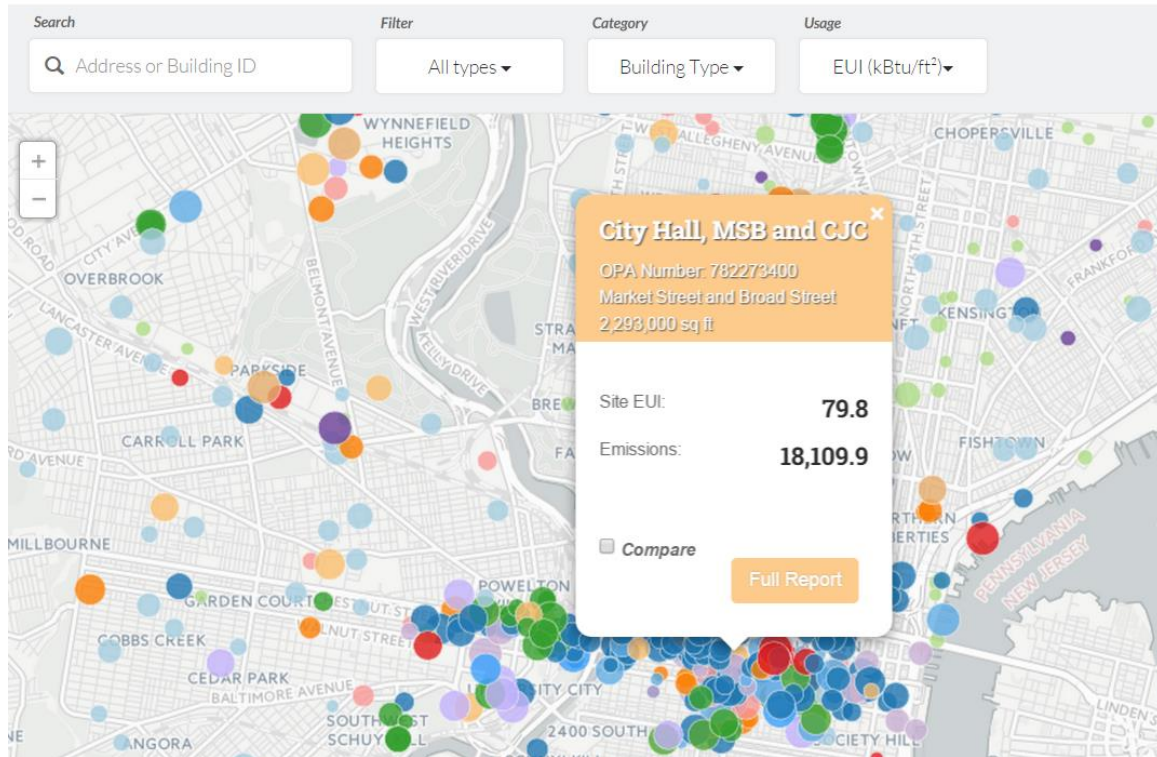


Total Energy Usage and Carbon Emissions 2012-15





THE CITY OF PHILADELPHIA
MAYOR'S OFFICE OF
SUSTAINABILITY



<http://visualization.phillybuildingbenchmarking.com>



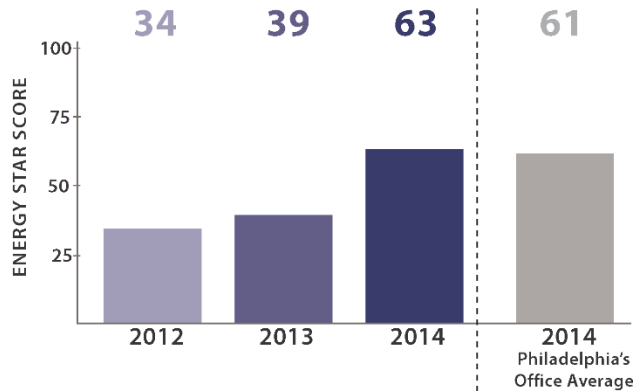


2014 Building Energy Performance Profile

ADDRESS: XXXXXXXX OPA ID#: XXXXXX



Your Building's ENERGY STAR® Score from 2012 to 2014 (1-100 Score, 100 is most efficient building)



Your 2014 Ranking for Similar Buildings in Philadelphia

Ranking is based on self-reported data provided by building owners and operators.

Your Building Ranks # **102** out of **168** similar Office buildings

YOUR BUILDING COULD SAVE

\$63,191*

BY REDUCING ITS ANNUAL ENERGY USAGE BY **5%**

See next page for more details on energy efficiency opportunities to save money & energy!

*Savings are based on your 2014 building's electricity and natural gas usage and utility cost data is based EIA's estimated regional cost of energy for 2014.



EnergyWorks

ENERGY EFFICIENCY IMPROVEMENTS



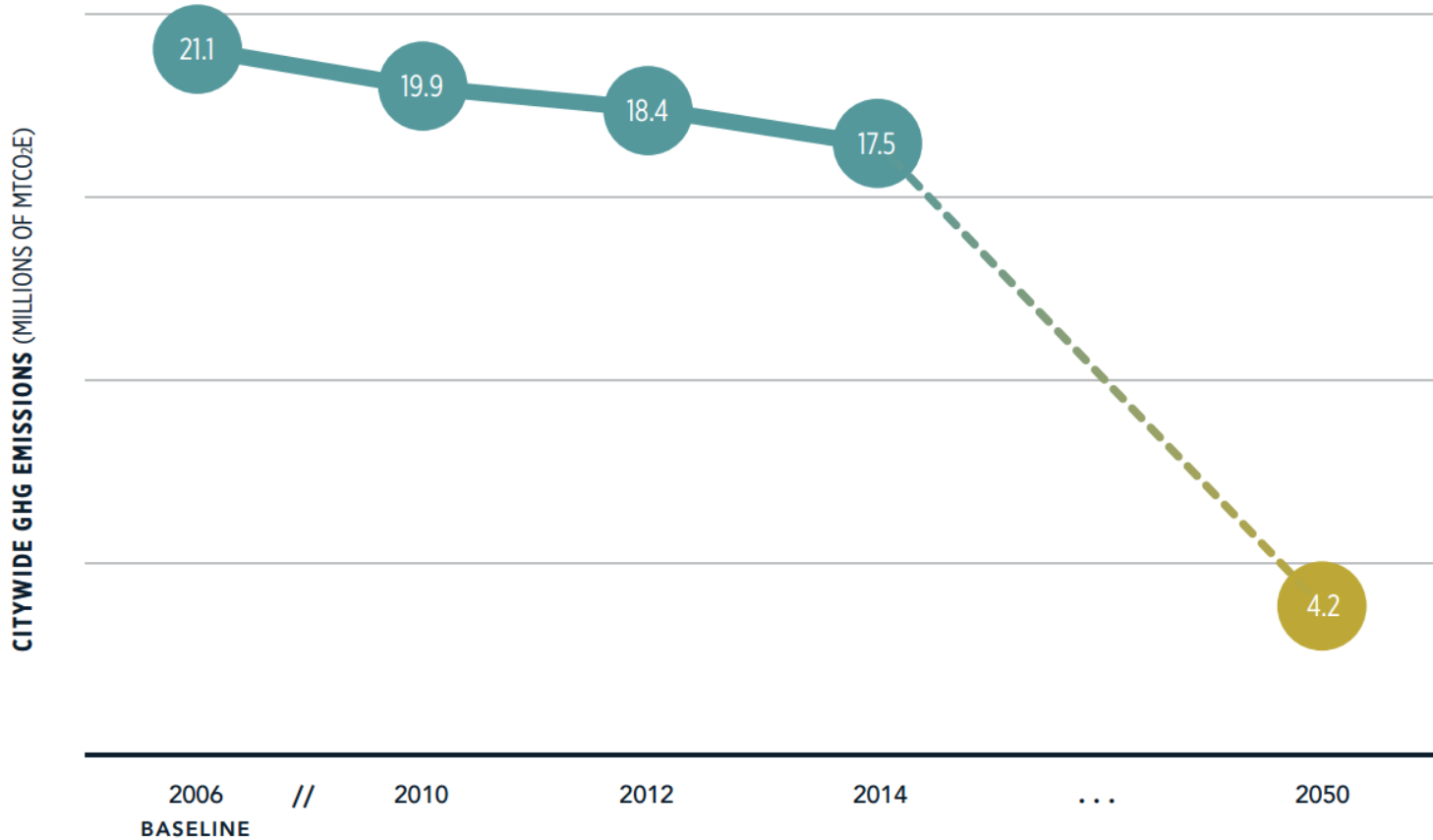
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11. REDUCING GREENHOUSE GAS EMISSIONS 80 PERCENT BY 2050





Citywide Energy Vision

1) Greenhouse Gas Emissions Scenario Tool

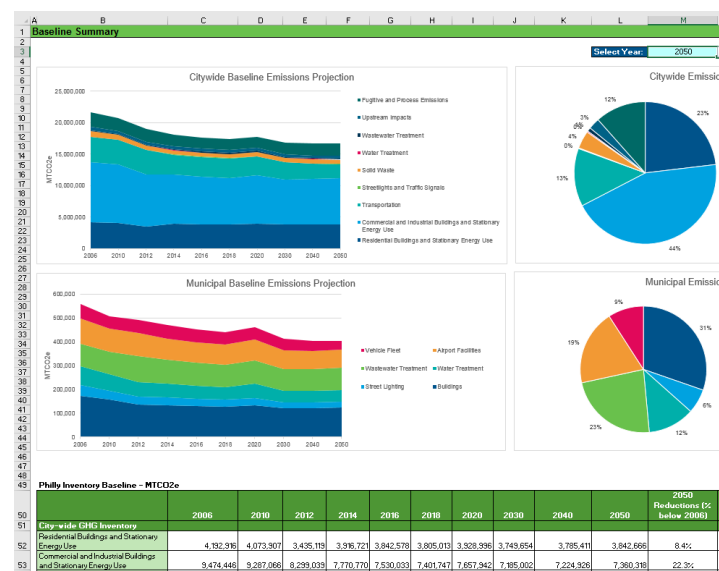
Excel-based model allowing for future expansion and tracking of Philadelphia greenhouse gas emissions.

2) Municipal Energy Master Plan

Building-level evaluation of potential energy and carbon savings options for city-owned facilities.

3) Citywide Energy Vision

Exploration and prioritization of citywide strategies to improve energy efficiency in the built environment, create jobs, and meet city's 80 by 50 carbon commitment.



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