



# **City Energy Project: Scaling Up Energy Efficiency Throughout Ten U.S. Cities**

**Kimi Narita, Natural Resources Defense Council  
March 22, 2016**

**2016 National Symposium on Market Transformation (New Strategies Track)**

# The City Energy Project is an ambitious national initiative to improve the energy efficiency of existing buildings in major American cities

## Funders

**Bloomberg  
Philanthropies**

**THE  
KRESGE  
FOUNDATION**

**DD**  
DORIS DUKE  
CHARITABLE FOUNDATION

## Hub Staff



## Cities



# The City Energy Project Theory of Change

- A. American cities will lead
- B. Focus on large existing buildings
- C. Advance proven strategies
- D. Create partnerships
- E. Data is everything

# American cities will lead

**10 mayors** of large American cities have committed to making their cities stronger and healthier through the City Energy Project: Better buildings for better cities.

**Atlanta**  
Mayor  
Kasim Reed



**Kansas City, MO**  
Mayor  
Sly James

**Boston**  
Mayor  
Martin J. Walsh



**Los Angeles**  
Mayor  
Eric Garcetti

**Chicago**  
Mayor  
Rahm Emanuel



**Orlando**  
Mayor  
Buddy Dyer

**Denver**  
Mayor  
Michael B. Hancock



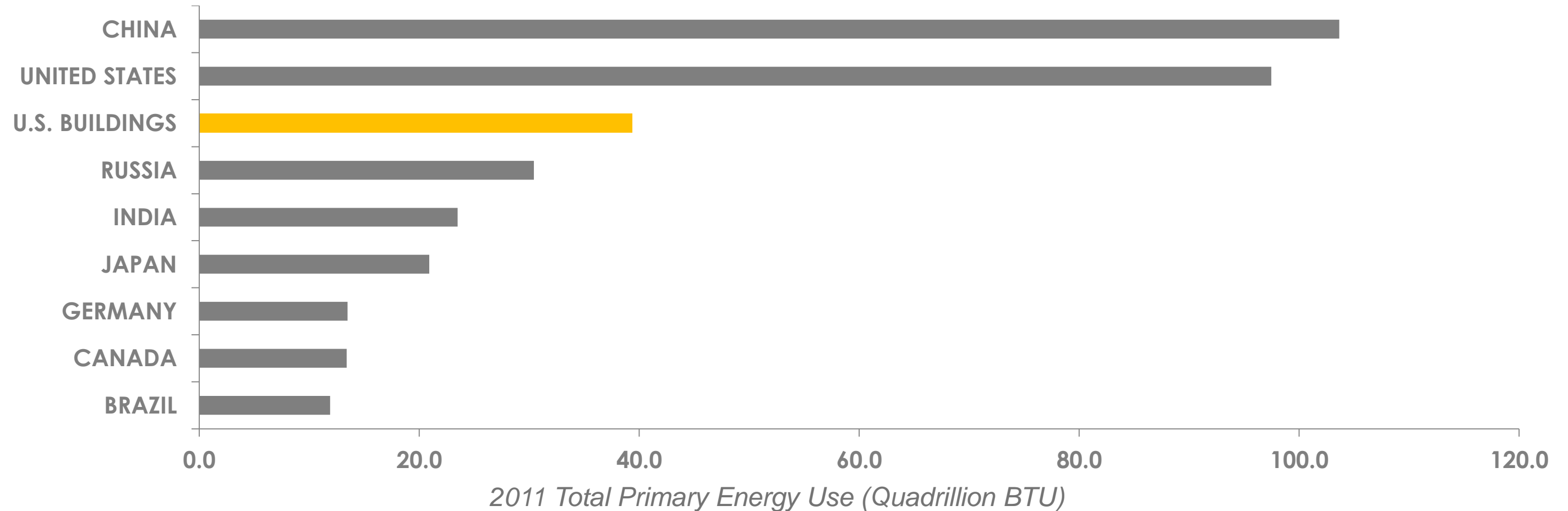
**Philadelphia**  
Mayor  
Michael A. Nutter

**Houston**  
Mayor  
Annise Parker



**Salt Lake City**  
Mayor  
Ralph Becker

# THE PROBLEM: On the whole, existing buildings in the U.S. use more energy than any country except China and the U.S.



...And cities represent **more than 70%** of energy-related carbon dioxide emissions worldwide

...And buildings in cities generally represent **over half** of a cities' energy and carbon emissions

***City Energy Project was designed to address these issues***

# THE SOLUTION: Energy efficiency in existing buildings



# Similar to other critical arenas: Rating and transparency drives demand and competition

Item	Price
Hot Cakes	3.00
Hot Cakes with egg	4.50
Hot Cakes with sausage	4.30
Hot Cakes with egg and sausage	5.10
Hot Cakes with sausage and fruit	4.80
Hot Cakes with sausage and fruit and egg	5.70

### Nutrition Facts

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

Amount Per Serving		Calories from Fat 120	
Calories 280		% Daily Value*	
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

### EPA Fuel Economy Estimates

These estimates reflect new EPA methods beginning with 2008 models.

CITY MPG	Estimated Annual Fuel Cost	HIGHWAY MPG
<b>18</b>	<b>\$2,039</b>	<b>25</b>
Expected range for most drivers <b>15 to 21 MPG</b>	based on 15,000 miles at \$2.80 per gallon	Expected range for most drivers <b>21 to 29 MPG</b>
<b>Combined Fuel Economy</b>		
This Vehicle <b>21</b>		
10 ——— 31 All SUVs		

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

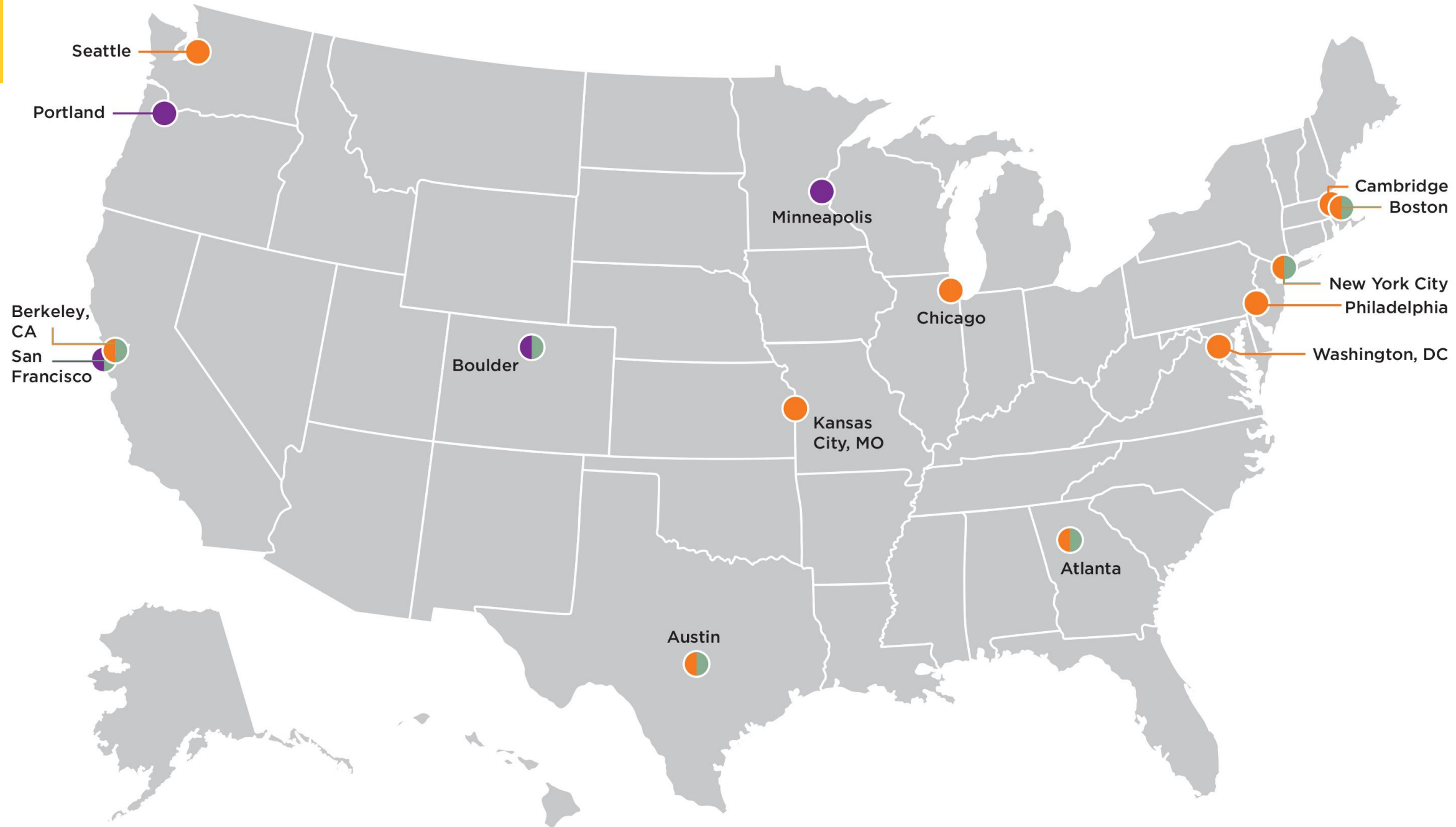
See the FREE Fuel Economy Guide at dealers or [www.fueleconomy.gov](http://www.fueleconomy.gov)

# U.S. City Building Benchmarking, Transparency, and Audit Policies

**15** cities and  
**1** county

*(Montgomery County, MD)*  
have passed  
benchmarking and  
transparency laws

**7** cities  
have passed  
audit laws



- Commercial policy adopted
- Commercial & multifamily policy adopted
- Audit policy adopted



# Atlanta Unanimously Passes the Commercial Buildings Energy Efficiency Ordinance in April 2015

Building owners of most buildings over 25,000 square feet are required to benchmark and report to the City their properties' energy and water use annually and poorer performing buildings will complete an energy and water audit once every 10 years.

City of Atlanta anticipates that the ordinance will lead to a **20 percent reduction in commercial energy use by 2030**, spur the creation of more than a thousand jobs annually in the first few years, and reduce carbon emissions by 50 percent by 2030 (from 2013 levels).



# Private Sector Challenge Programs

*Voluntary commitment from buildings in the private sector to benchmark their buildings and reduce their energy use by a certain percentage over 1-5 years.*

- Atlanta Better Buildings Challenge
- Retrofit Chicago
- Denver City Energy Project/Lease for Efficiency
- Houston Green Office Challenge
- KC City Energy Project
- Los Angeles Better Buildings Challenge
- Philadelphia's Race for Energy Reduction
- Salt Lake City's Project Skyline



## Renew Boston Trust



*Renew Boston will manage energy retrofits of public buildings that are self-financed by future savings. This step marks a historic turning point in municipal energy efficiency: from the era of incentives, to the age of true investments. Renew Boston will reduce costs, increase resilience, and create jobs. And it will set a standard for private property owners across the city. Environmental action is no longer a burden we accept. It is an opportunity we embrace.*

*- Mayor Marty Walsh, December 10, 2014*

## PACE Financing

**Houston** became the first Texas city to adopt a commercial PACE program on November 4, 2015.

**Atlanta** working on finalizing their PACE program

**Kansas City, MO** working to expand PACE financing

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## City Advisor

- Dedicated person working in each city exclusively on energy efficiency in existing buildings.
- Executes the city's plan to address energy efficiency
- Interdepartmental coordination; technical expertise; stakeholder engagement; outreach and education



## Local Partners

- Specific technical assistance on the project in areas including: outreach and education; stakeholder engagement facilitation; cleaning up building data; benchmarking help center
- General education on energy efficiency to a key stakeholder



# City Energy Project's Model: Networks

## Learning Network Across All CEP Cities

- An in-depth peer-to-peer network of experienced city advisors and staff available to provide essential assistance and mentorship



## Access to Key Partners and Stakeholders

- Strong existing project relationships with key national and local stakeholders and organizations who want to help cities succeed



# The Benefit of Data Transparency - City of Philadelphia Case Study

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PORTFOLIO MANAGER



**THE CITY OF PHILADELPHIA BUILDING ENERGY BENCHMARKING:**  
Building energy data will drive market transformation, helping building owners reduce energy usage and save money.

EXPLORE THE DATA!



**2014 BUILDING BENCHMARKING DATA TOOL**

EXPLORE THE MAP & CHARTS



Share 10



ENERGY REDUCTION RACE



START BENCHMARKING



UNDERSTANDING

PORTFOLIO MANAGER

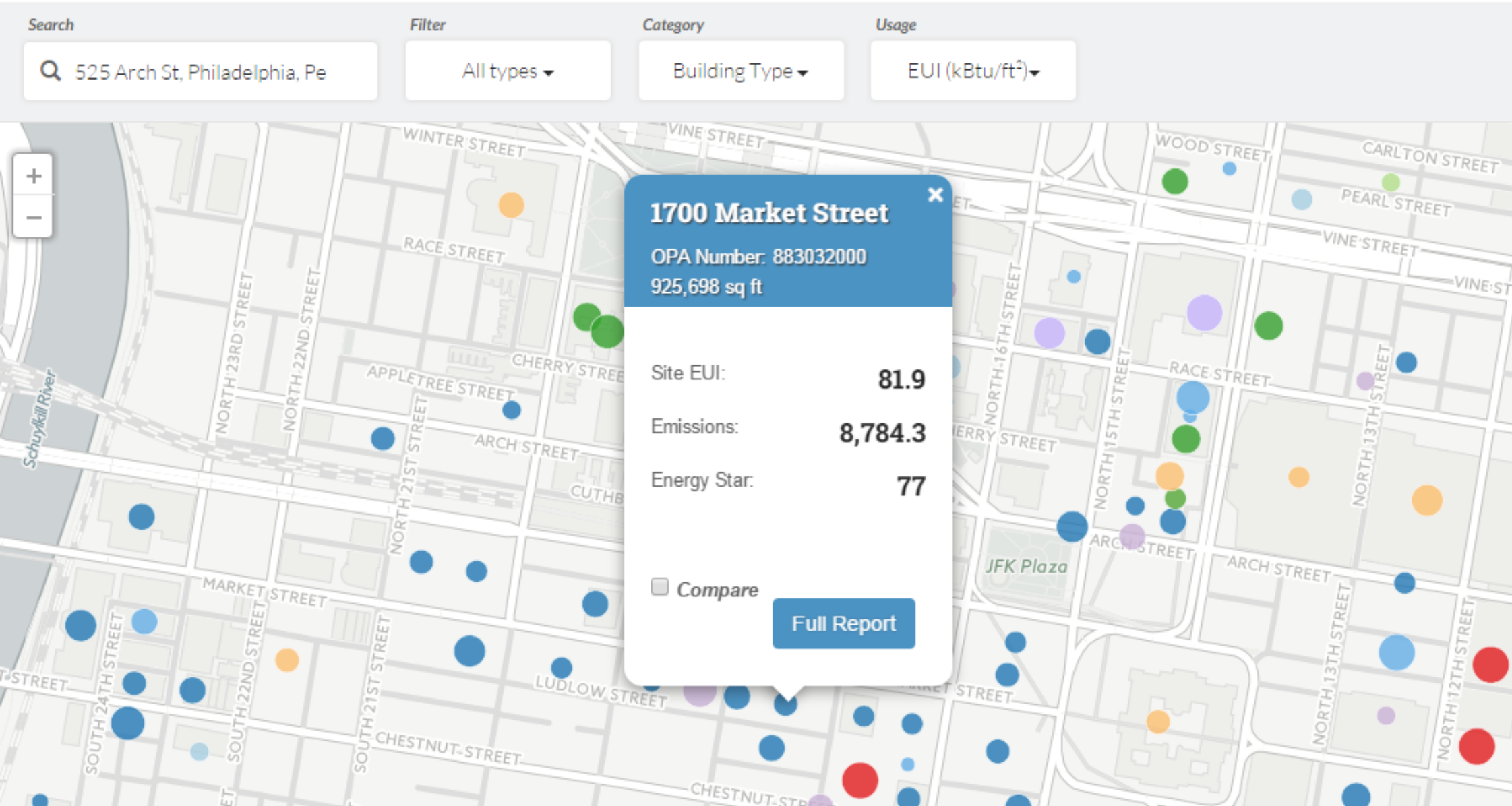
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REPORT

# The Benefit of Data Transparency – City of Philadelphia Case Study

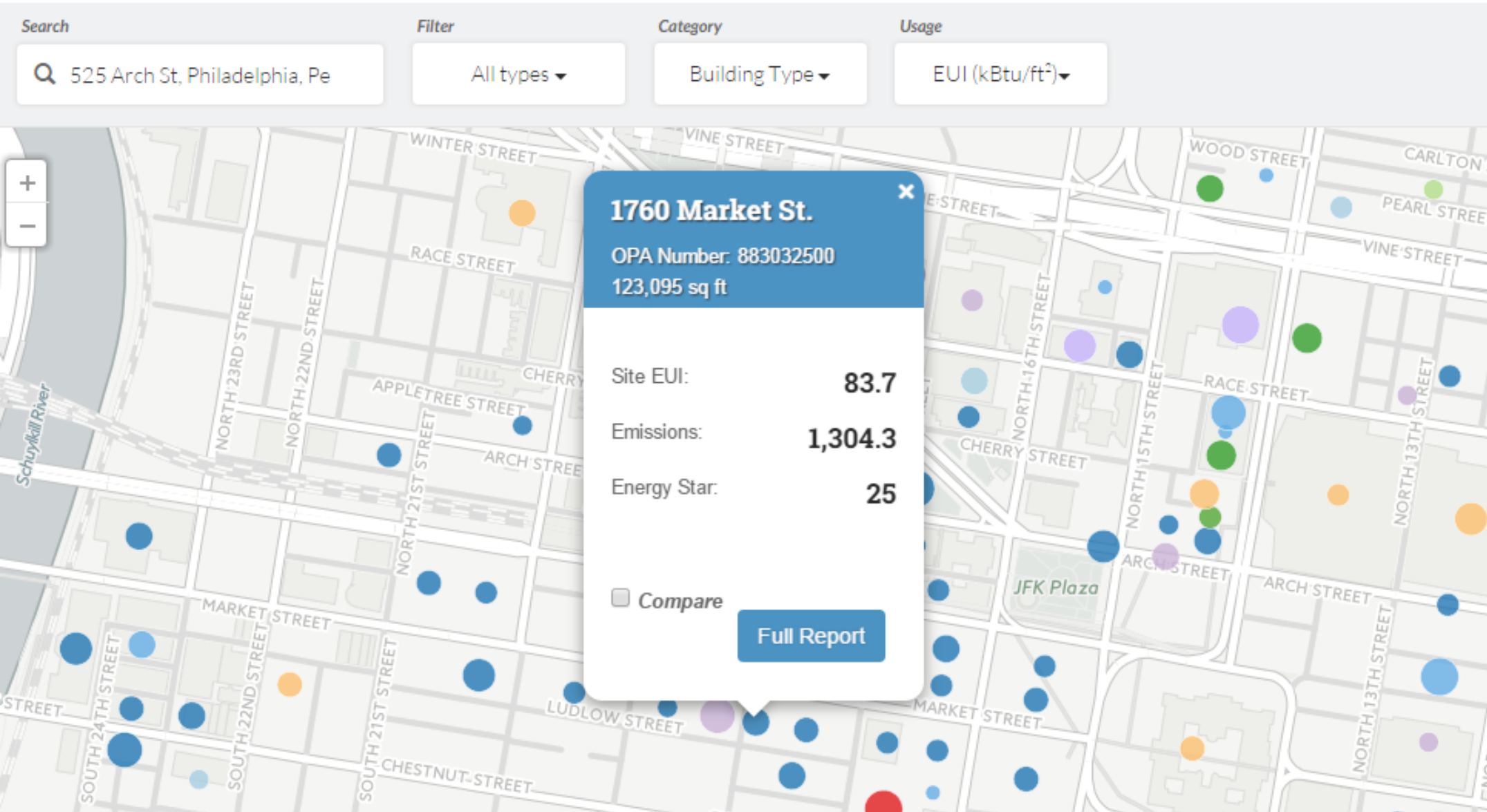
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# The Benefit of Data Transparency – City of Philadelphia Case Study

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# The Benefit of Data Transparency – City of Chicago Case Study


**Chicago Energy Benchmarking - 2014 Data Reported in 2015**  
 Based on [Chicago Energy Benchmarking](#)  
 The Chicago Building Energy Use Benchmarking Ordinance calls on existing municipal, commercial, and residential buildings larger than 50,000 sq ft to report their energy use.

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	Data Year	ID	Property Name	Address	ZIP Code	Community Area
1	2014	157767	Roosevelt Hi-CPS	3436 W WILSON AVE	60625	ALBANY PARK
2	2014	100256	Curie Metrop-CPS	4975 S Archer	60632	ARCHER HEIGHTS
3	2014	101551	METROPOLITIAN PIER AND EXPOSITION AUT	301 Cermak Road	60616	ARMOUR SQUARE
4	2014	100396	St. Rita of Cascia High School	7740 South Western Avenue	60620	ASHBURN
5	2014	250052	Steinmetz Ac-CPS	3030 N MOBILE AVE	60634	BELMONT CRAGIN
6	2014	168174	Kelly High S-CPS	4136 S California Ave	60632	BRIGHTON PARK
7	2014	102532	Advocate Trinity Hospital	2320 E. 93rd. Street	60617	CALUMET HEIGHTS
8	2014	250051	Simeon Caree-CPS	8235 S VINCENNES AVE	60620	CHATHAM
9	2014	112188	Dunbar Vocat-CPS	3000 S King Dr	60616	DOUGLAS
10	2014	111290	IIT Research Tower	10 West 35th Street	60616	DOUGLAS
11	2014	101492	Wright College	4300 North Narragansett	60634	DUNNING
12	2014	102409	Senn Achieve-CPS	5900 N GLENWOOD AVE	60660	EDGEWATER
13	2014	250004	Kennedy-King College	6301 South Halsted	60621	ENGLEWOOD
14	2014	250048	Kennedy High-CPS	6325 W 56th St	60638	GARFIELD RIDGE
15	2014	250138	Provident Hospital	500 E. 51st St.	60615	GRAND BOULEVARD
16	2014	250124	Albert Merritt Billings	950 East 59th St.	60637	HYDE PARK
17	2014	250127	Bernard Mitchell Hospital	5815 S. Maryland Av.	60637	HYDE PARK
18	2014	250128	CCD	5700 S. Maryland Av.	60637	HYDE PARK
19	2014	250125	Comer Children's Hospital	5721 S. Maryland Ave.	60637	HYDE PARK
20	2014	250126	DCAM	5758 S. Maryland Ave.	60637	HYDE PARK
21	2014	110848	Gordon Center for Integrative Science (GCIS)	929 East 57th Street	60637	HYDE PARK
22	2014	102455	Harper Center (Booth School)	5807 South Woodlawn Ave.	60637	HYDE PARK
<b>Totals</b>		243				

**Filter**

Conditional Formatting

Sort & Roll-Up

**Filter**

Filter this dataset based on contents.

No conditions defined yet.

[+ Add a New Filter Condition](#)

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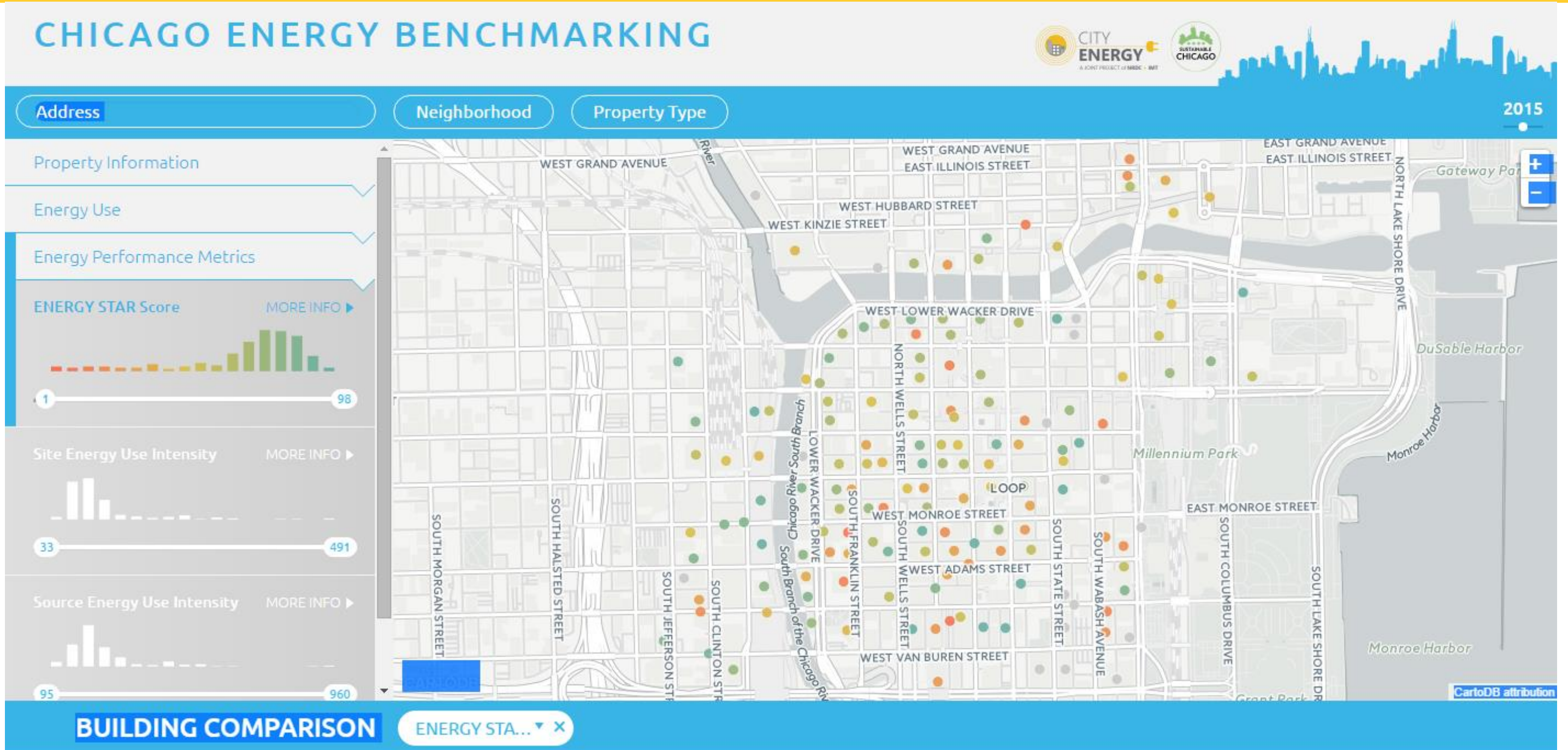
With the following base filters

Data Year is 2014

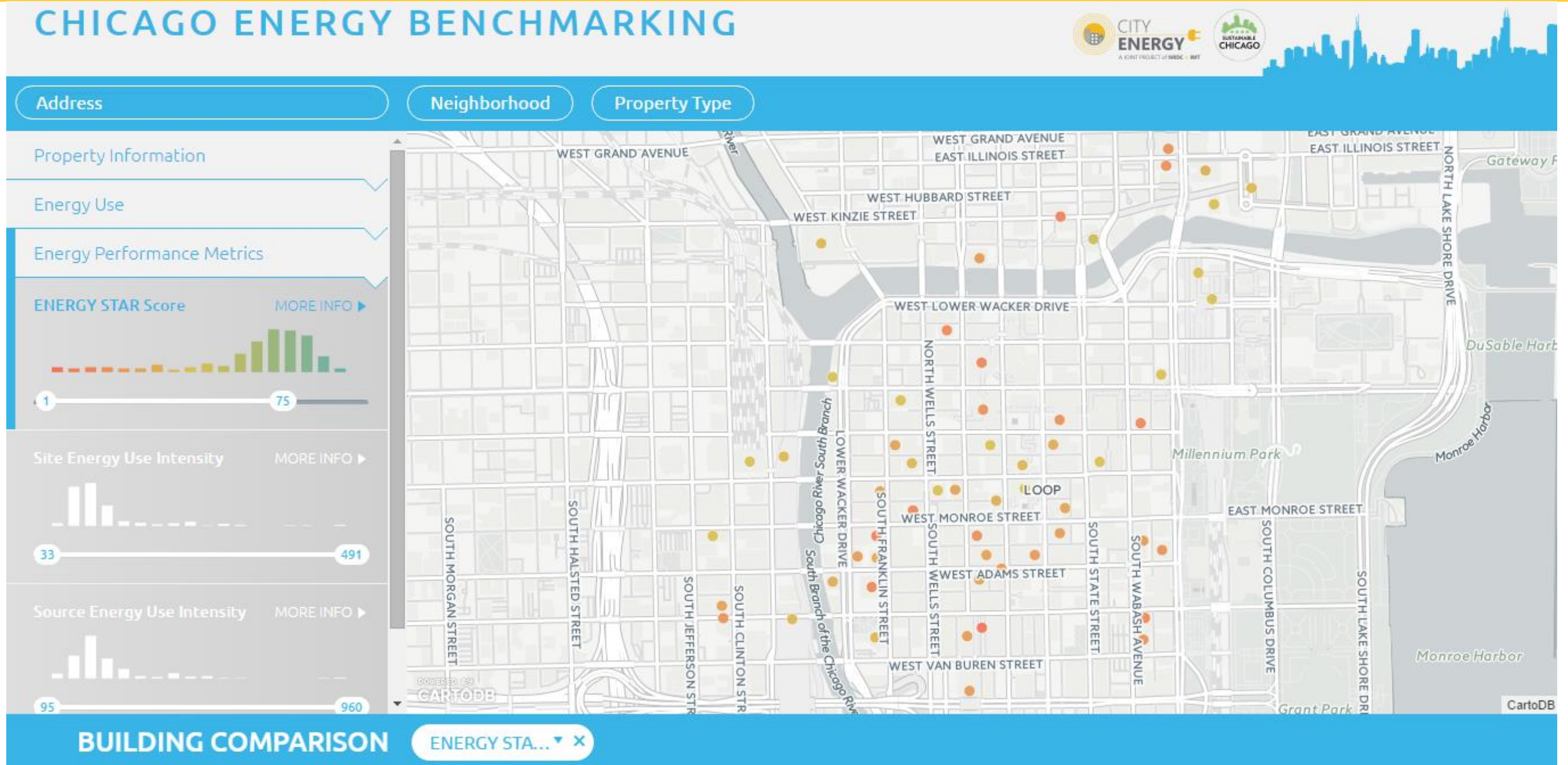
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Never created a filter before? Watch a short tutorial video [here](#).

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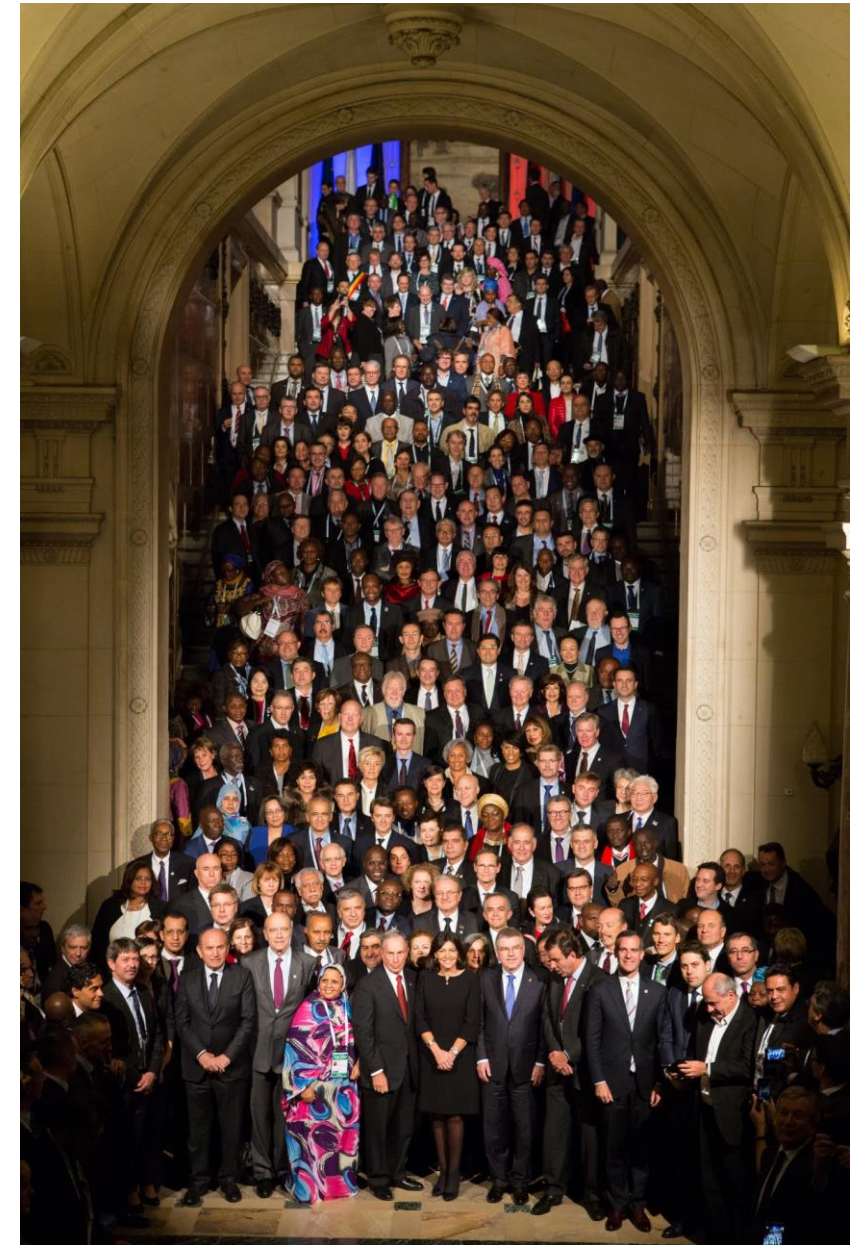
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Second phase of City Energy Project announced during the UN Conference on Climate Change in Paris in December 2015

An additional **\$10.5 million** from The Doris Duke Charitable Foundation, Kresge Foundation, and Bloomberg Philanthropies for **January 2016 – December 2018**

Funding used to continue the support in existing 10 cities and **expand the project to new cities**



**Questions?**