

UNLOCKING THE POTENTIAL OF EXISTING BUILDINGS

Southeast Florida Regional
Climate Leadership Summit

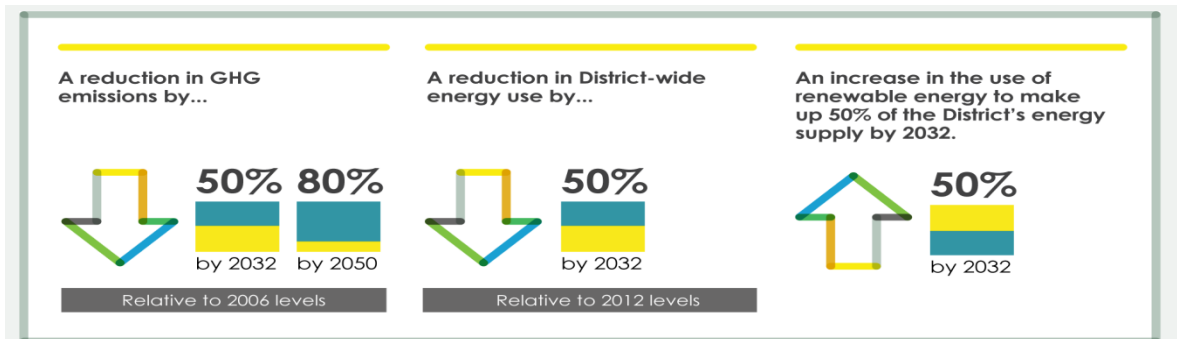
Katie Bergfeld
October 24, 2018



TAG THIS PRESENTATION @DOEE_DC

WASHINGTON, DC CLIMATE AND ENERGY GOALS

- **SUSTAINABLE DC:** In just one generation—20 years—the District of Columbia will be the healthiest, greenest, and most livable city in the United States.
- **CARBON NEUTRALITY:** By 2050, the District will be a carbon neutral and climate-resilient city



CLEAN AND AFFORDABLE ENERGY ACT, 2008

Privately-owned



> 50,000 square feet

DC-owned



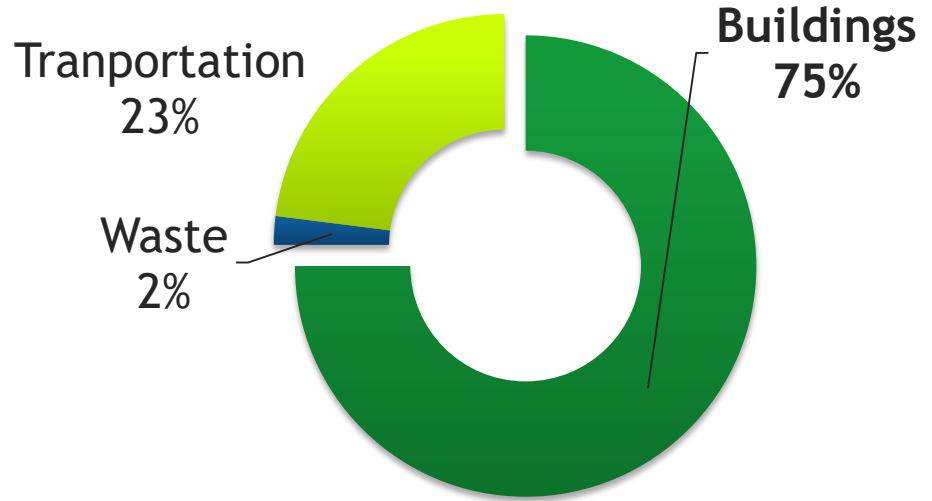
> 10,000 square feet



ENERGY STAR®
PortfolioManager®

BUILDING ENERGY USE IN DC

Buildings are DC's largest source of Greenhouse Gas Emissions:





Building address Ward Property Type Report Status 2012 2013 2014 2015 2016

METRIC FILTERS

RESET ALL

Select a metric to see filtered results on the map

Property Information

Energy Use

Water Use

Energy Performance Metrics

ENERGY STAR Score

MORE INFO



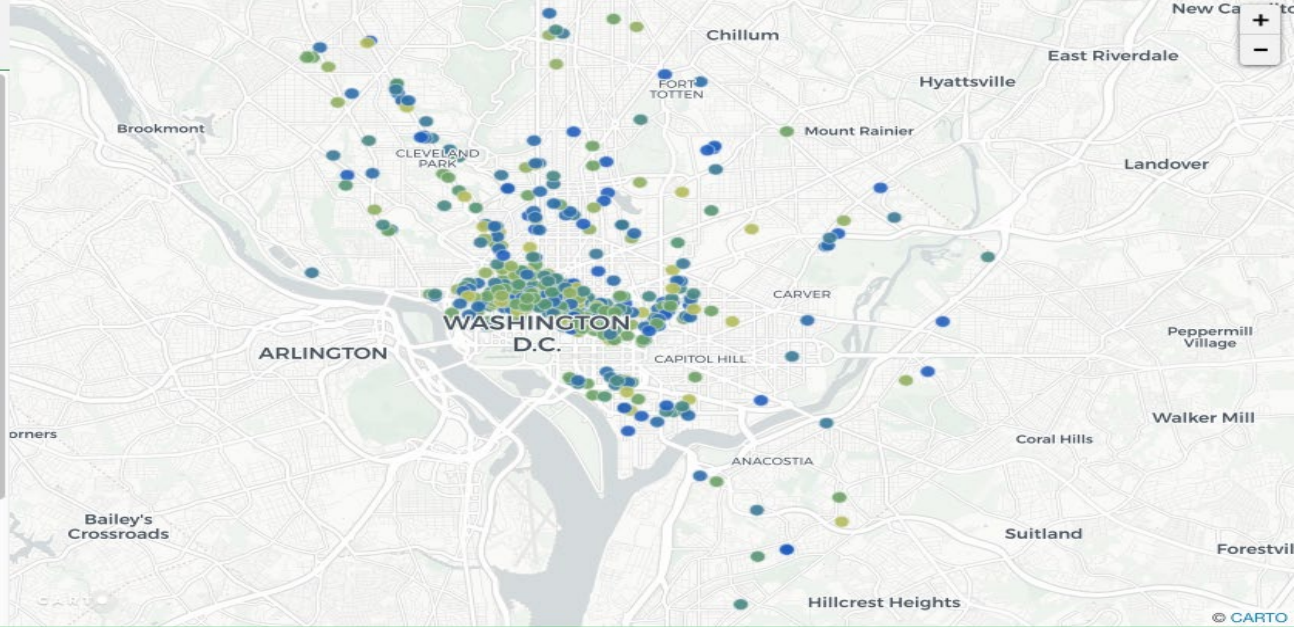
Site Energy Use Intensity

MORE INFO



Source Energy Use Intensity

MORE INFO



BUILDING COMPARISON

ENERGY ST...

Previously, only data on ENERGY STAR and LEED certified buildings

www.energybenchmarkingdc.org



Building address Ward Property Type Report Status 2012 2013 2014 2015 2016

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MORE INFO



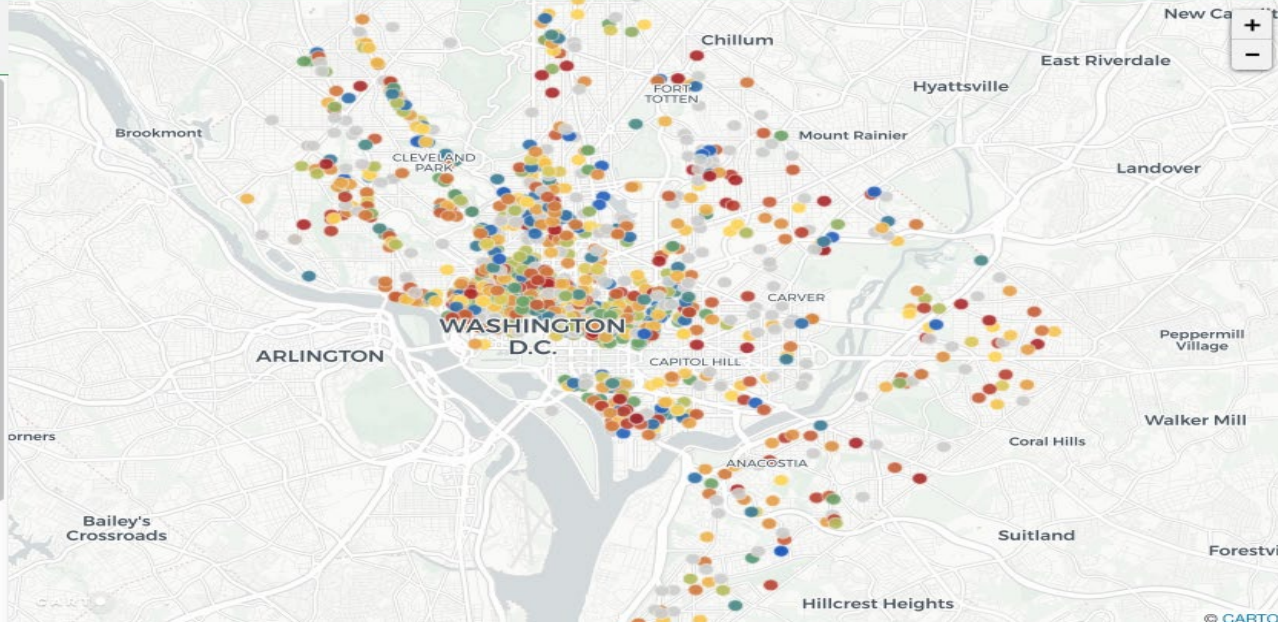
Site Energy Use Intensity

MORE INFO



Source Energy Use Intensity

MORE INFO



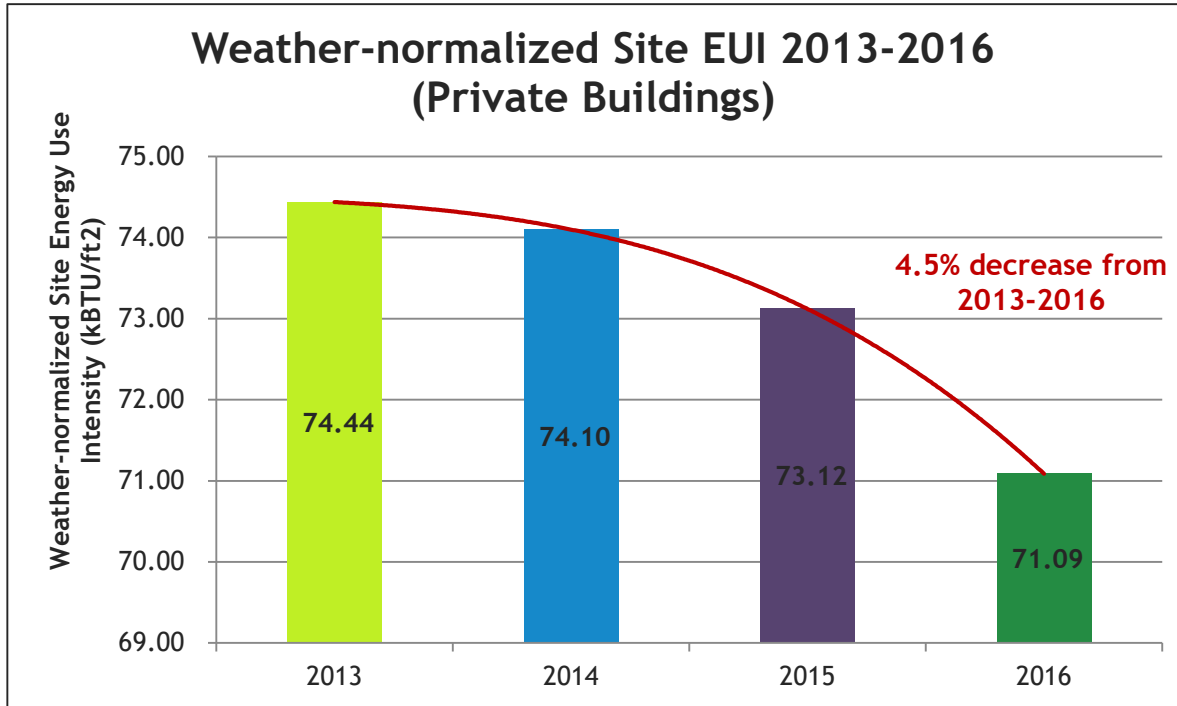
BUILDING COMPARISON

ENERGY ST... X

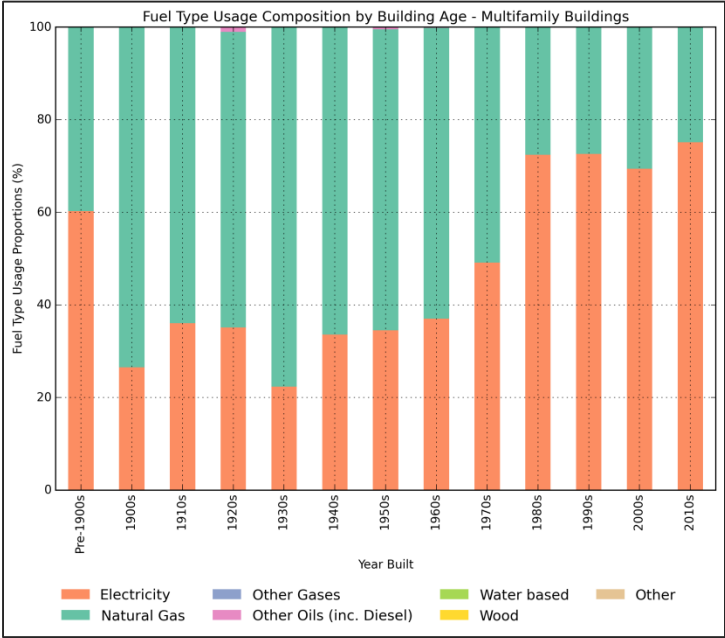
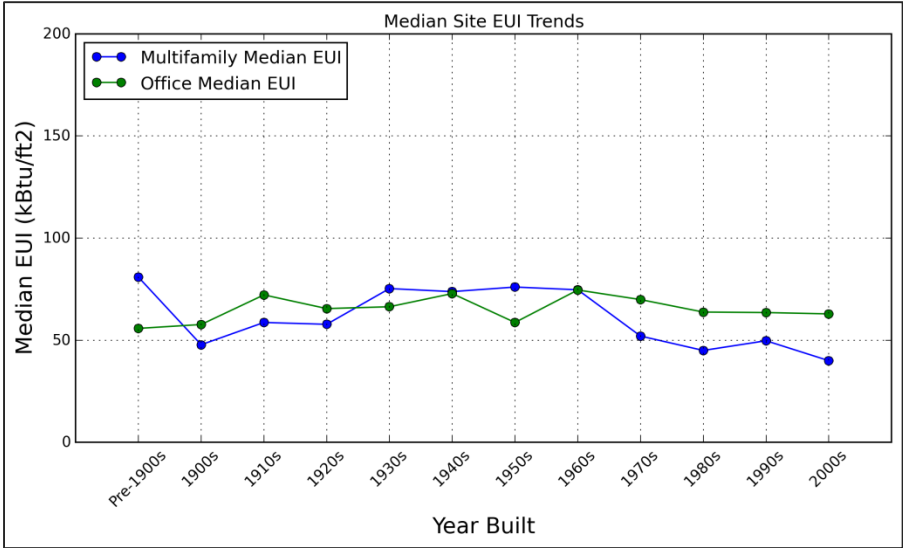
With Benchmarking & Transparency, much more data is available

www.energybenchmarkingdc.org

GREEN BUILDING REPORT



SITE ENERGY USE ANALYSIS



CY2014 Data

CLEAN ENERGY DC PLAN

Table A.2: Summary of building energy use

		Site Energy Use Intensities (EUI) in 2015 (kBtu/ft2)				Estimated Site Energy consumption in 2015 (million kBtu)			
		Total	Electricity	Natural Gas	Fuel Oil	Total	Electricity	Natural Gas	Fuel Oil
EIA	Residential					23,742	7,773	14,769	1,200
	Low-rise residential (1-4 units)	48.6	9	35	4.6	9,064	1,679	6,529	856
	Multifamily (5+ units)	85.5	35.5	48	2	14,678	6,094	8,240	343
Institutional and Government						16,079	9,570	6,435	73
DOEE Bench- marking	Education and Other Inst'l (non-gov)	101.4	60	41	0.4	3,206	1,897	1,296	13
	Federal Government	108.5	64	44	0.5	8,832	5,210	3,582	41
	District Government	103.4	64	39	0.4	3,073	1,902	1,159	12
	Embassy	109.4	63.5	45	0.9	967	561	398	8
	Commercial and Industrial					24,256	17,844	6,134	279
Office	88.9	75.5	12.5	0.9	15,256	12,954	2,145	157	
Hotel	103	57.5	45	0.5	2,425	1,354	1,059	12	
Other Comm. and Industrial	110.9	53	56	1.9	5,264	2,516	2,658	90	
Hospital and Other Medical	198.1	154.1	41	3	1,311	1,020	271	20	
Facilities Excluded from Analyses*						1,262	700	562	0
DIRECT	DC Water	n/a	n/a	n/a	n/a	762	700	62	0
	GSA Central Heating Plant	n/a	n/a	n/a	n/a	500	n/a	500**	0
Total						65,711	36,121	28,039	1,552
Total Site Energy Use from DOEE						65,820	36,147	28,120	1,552
Total Missing Site Energy Use						480	281	220	0
Percent Missing Site Energy Use						0.70%	0.70%	0.80%	0.00%

*These facilities are not included in policy simulations because the Plan assumes building actions do not affect their performance. **Natural gas use at the GSA Central Heating Plant includes only natural gas consumed in the process of generating steam for Federal Government buildings, so as to avoid double counting GHG emissions captured by these buildings' energy consumption.



PUTTING DATA TO WORK WITH

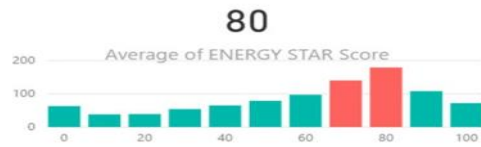


DC
SUSTAINABLE ENERGY
UTILITY

American University

College/University
Property Use (EPA) 1984
Sum of Year Built 4801 Massachuse...
Street Address 1
Buildings

- Property Name
- Select All
 - 3201 New Mexico
 - 4200 Wisconsin Ave
 - 4401 Connecticut Avenue
 - American University Ma...
 - Katzen Arts Center
 - Nebraska Hall
 - Washington College of ...



4400 Massachusetts Ave

Residence Hall/Dor... Property Use (EPA) 1959 Sum of Year Built 106453 SqFt (including parking) 100 Occupancy	American University Organization 1 Buildings Whole Building Metered Areas (Energy)
853,398.80 kWh (bought or generated)	105.70 Source EUI (kBtu/ft ²)
46.20 Site EUI (kBtu/ft ²)	78.00 Site EUI (national median)
46.30 Site EUI (weather normalized)	8.02 ElectricEUI

Property Use (EPA) Decade ...

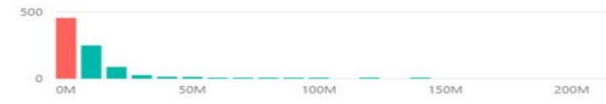
All All

ENERGY STAR Sq Ft (inc parking)

Multiple Sel... All

Nebraska

Energy Use (kBtu) - where this building ranks



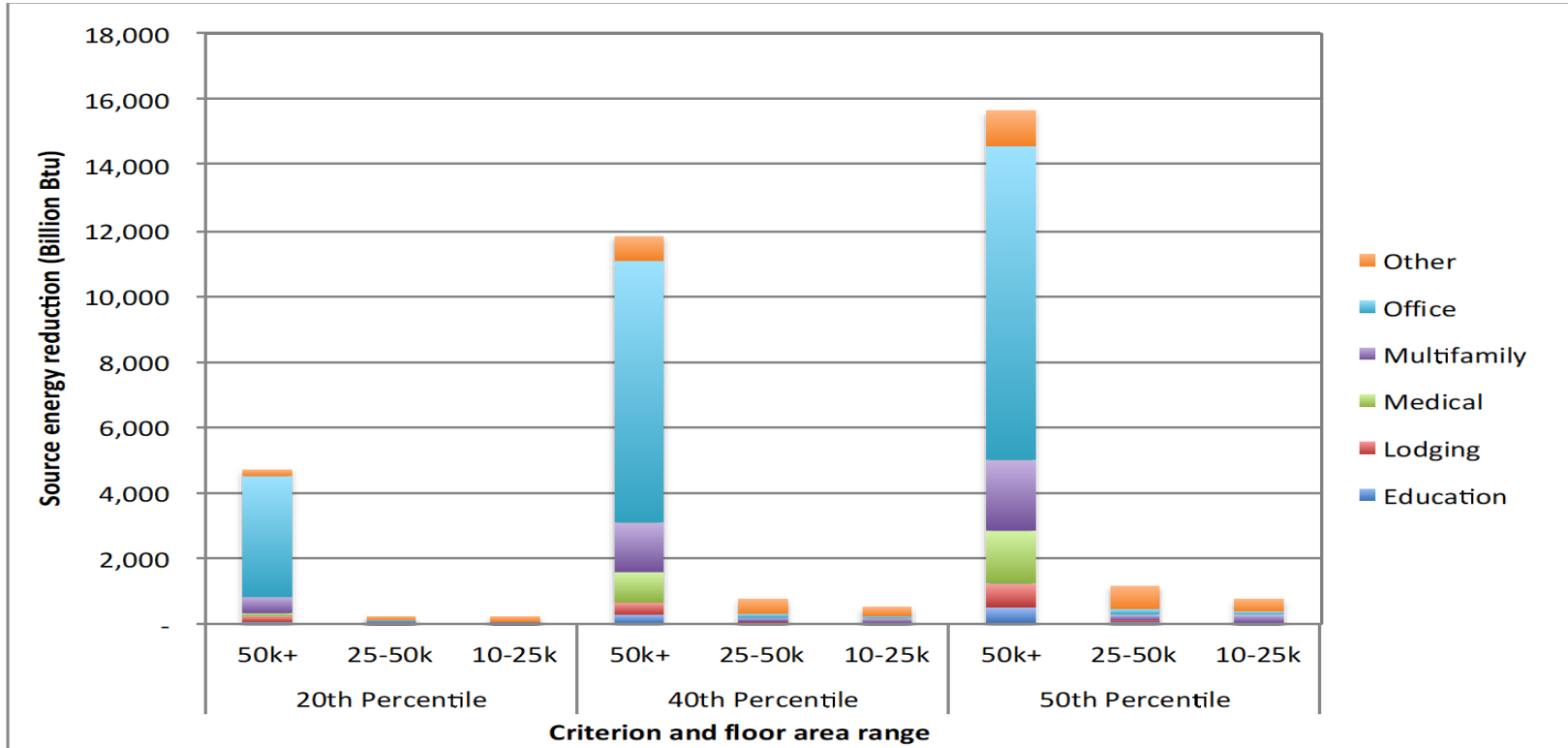
EUI - where this building ranks



Grid electricity purchased - where this building ranks



C40/LBNL TECHNICAL ASSISTANCE



Thank You!



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