New York City Case Study: Disclosure and Certification

GBPN Webinar #3
The Role of Labelling and Certification Schemes in Renovation Policy Packages

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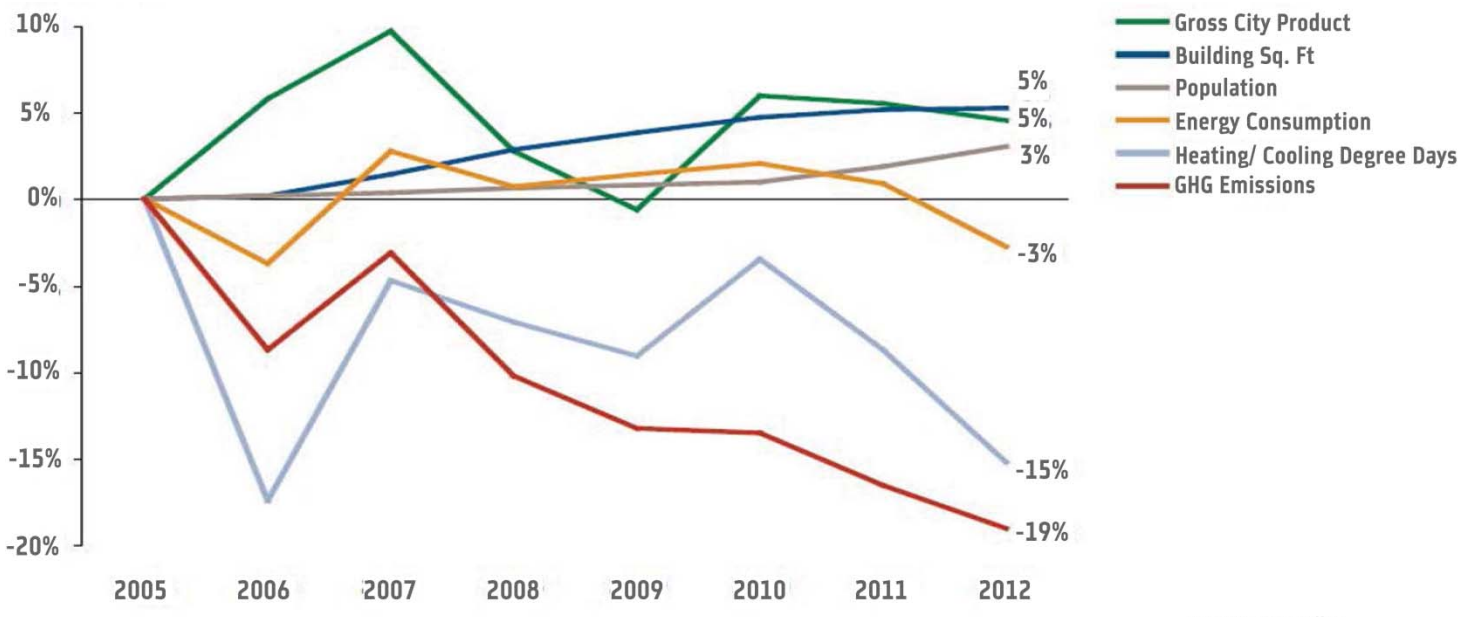
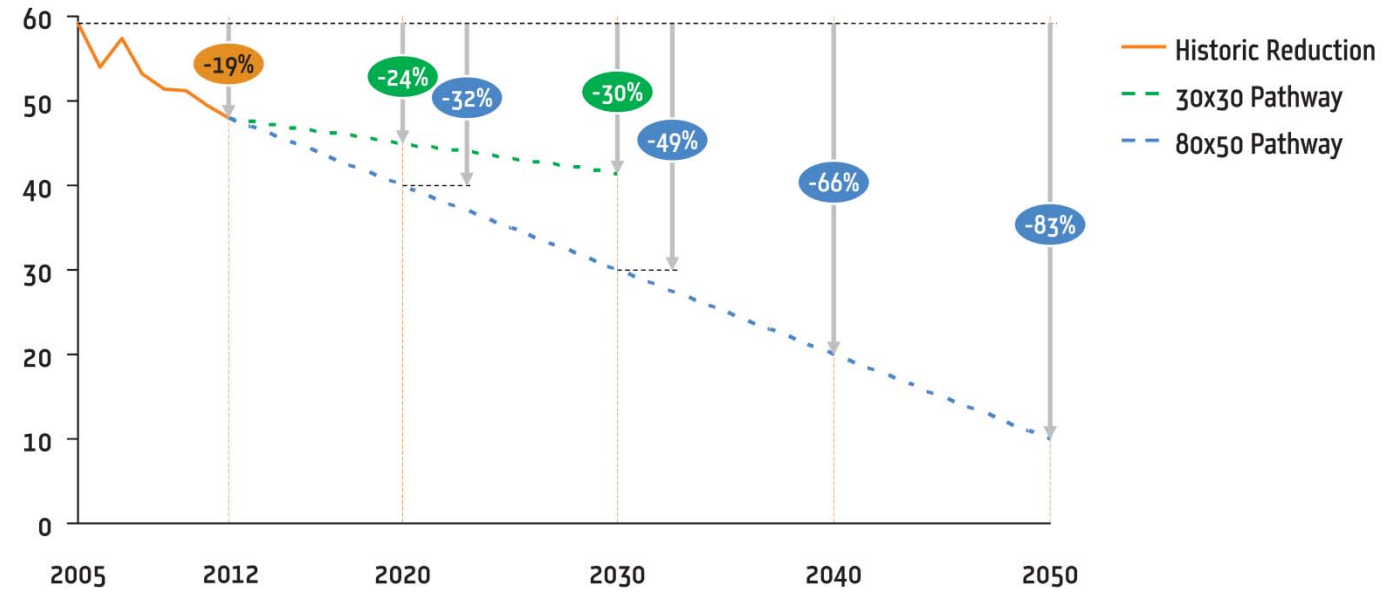
September 18, 2014

NYC's GHG goal is 30% reduction by 2030; 19% as of 2012



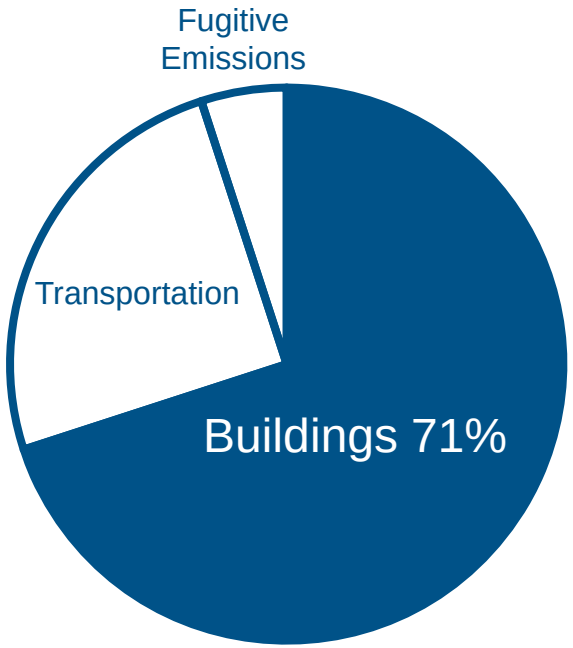
Source: NYC Mayor's Office



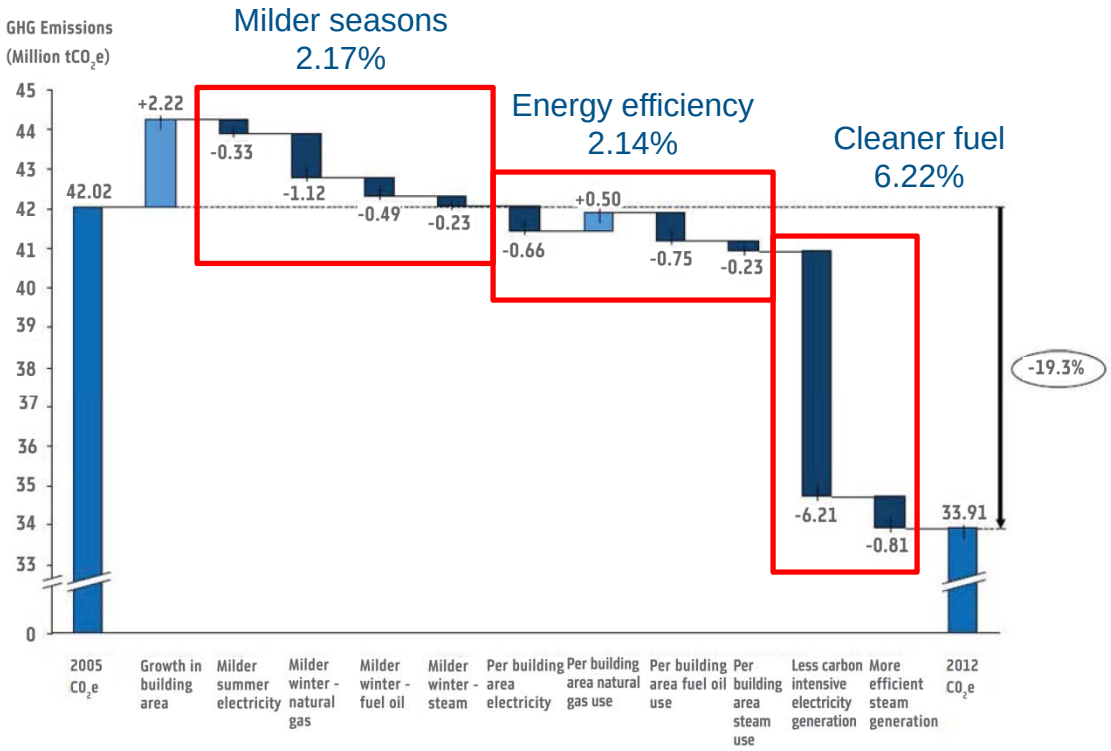
Source: NYC Mayor's Office

While emissions from buildings have dropped since 2005, more needs to be reduced through energy efficiency

2012 Citywide Emissions by Sector



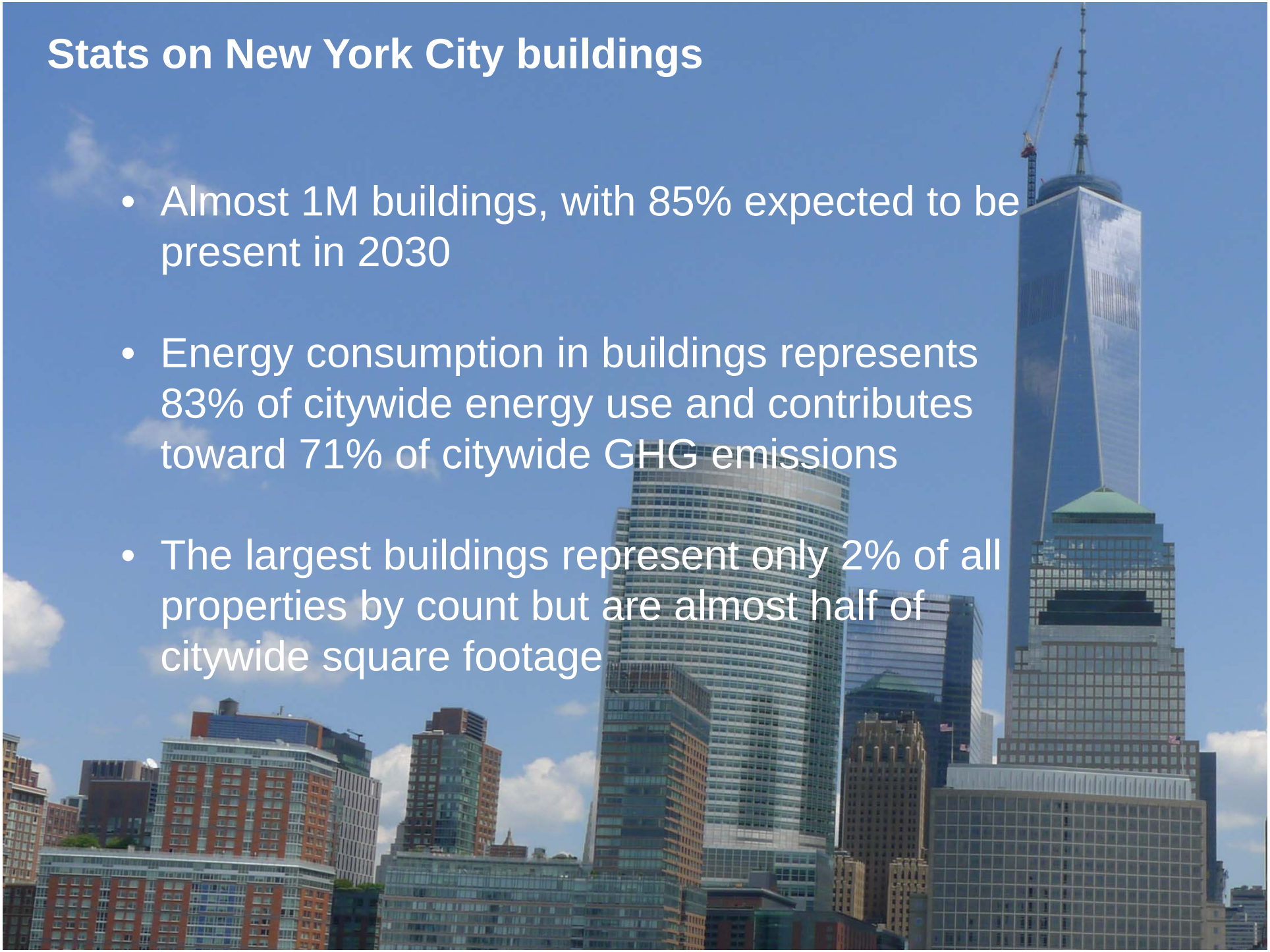
2005-2012 Changes in Citywide Building Emissions



NYC Mayor's Office

Source: NYC Mayor's Office

Stats on New York City buildings



- Almost 1M buildings, with 85% expected to be present in 2030
- Energy consumption in buildings represents 83% of citywide energy use and contributes toward 71% of citywide GHG emissions
- The largest buildings represent only 2% of all properties by count but are almost half of citywide square footage

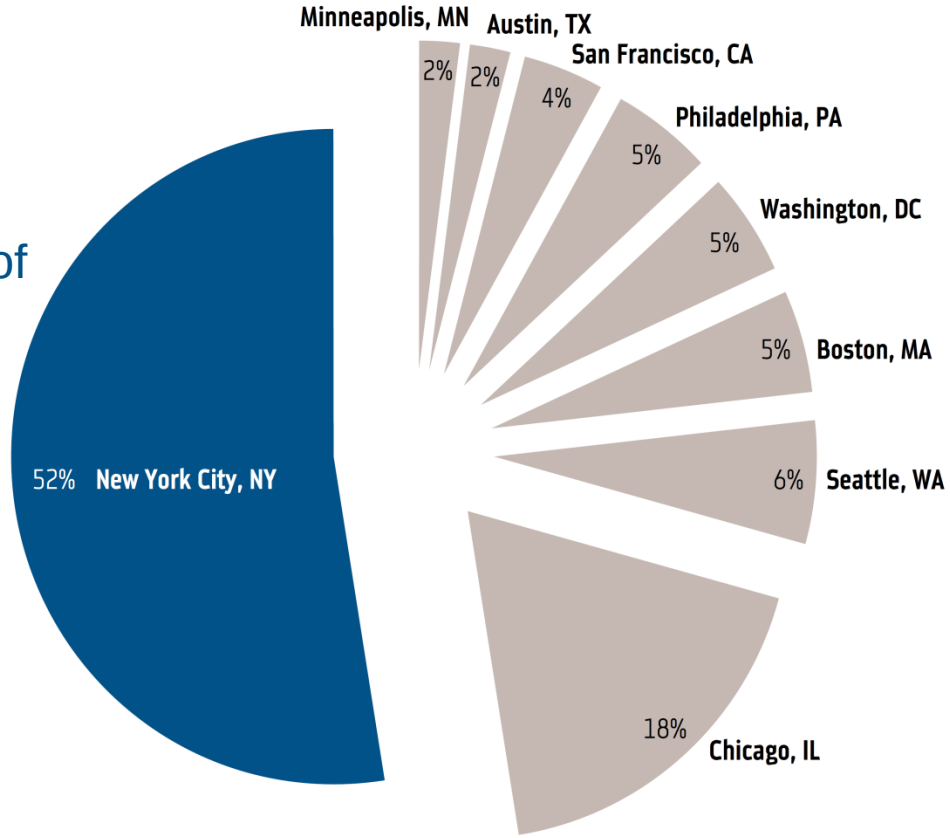
Energy efficiency in large buildings can make the highest impact; measuring and tracking energy data is essential

THE NEW YORK CITY
GREENER, GREATER
BUILDINGS PLAN

- New York City Energy Code
- Benchmarking
- Energy Audits and Retro-commissioning
- Lighting Upgrades and Sub-metering

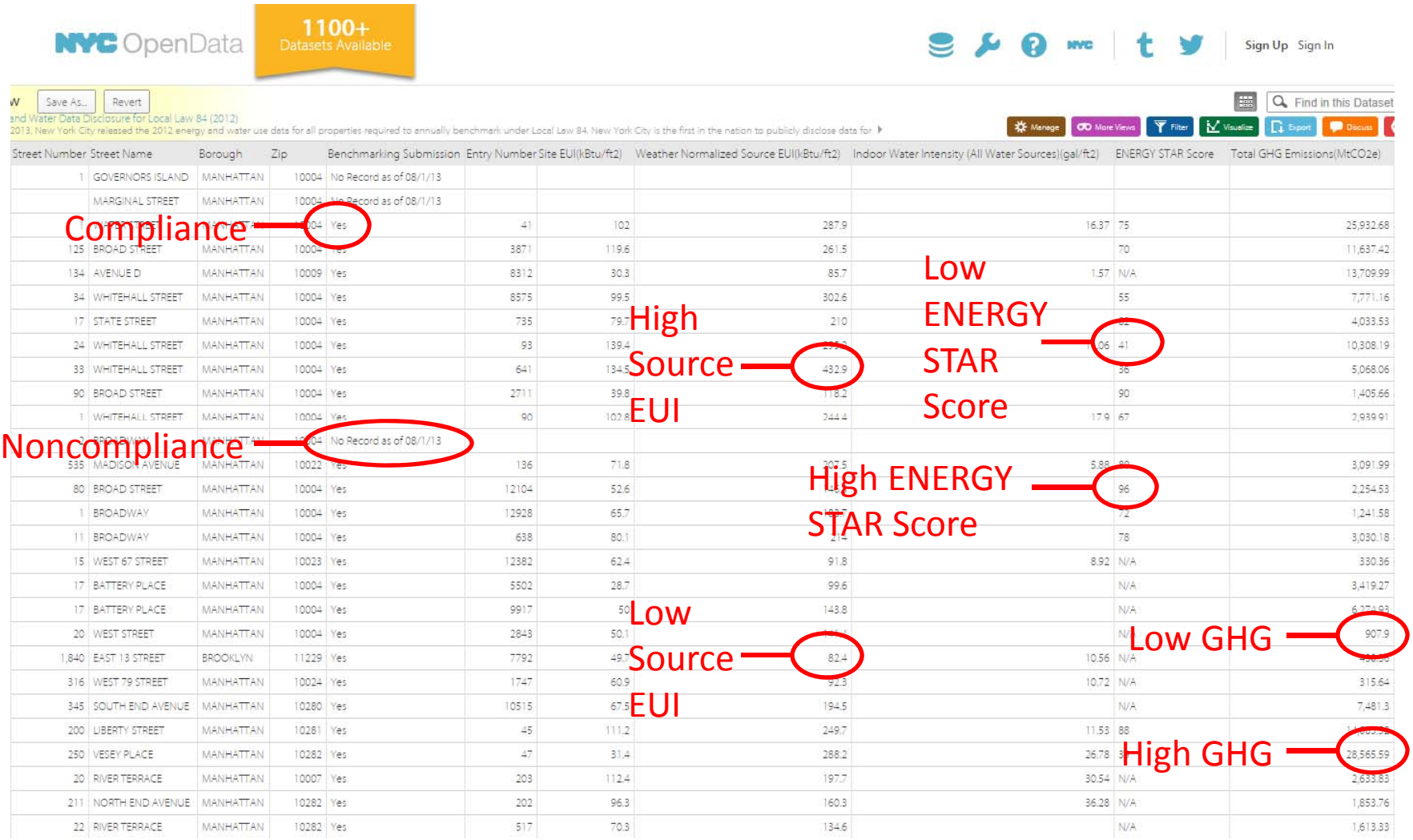
Energy and Water Benchmarking

- 13,000 properties with each building >50,000 sq ft (4,645 sq m), or groups of buildings>100,000 sq ft (9,290 sq m); 24,000 private buildings
- Private and public area required to benchmark is 2.5B sq ft (~240M sq m)
- Data collected through U.S. Environmental Protection Agency tool (ENERGY STAR Portfolio Manager)



Source: Institute for Market Transformation and NYC Mayor's Office

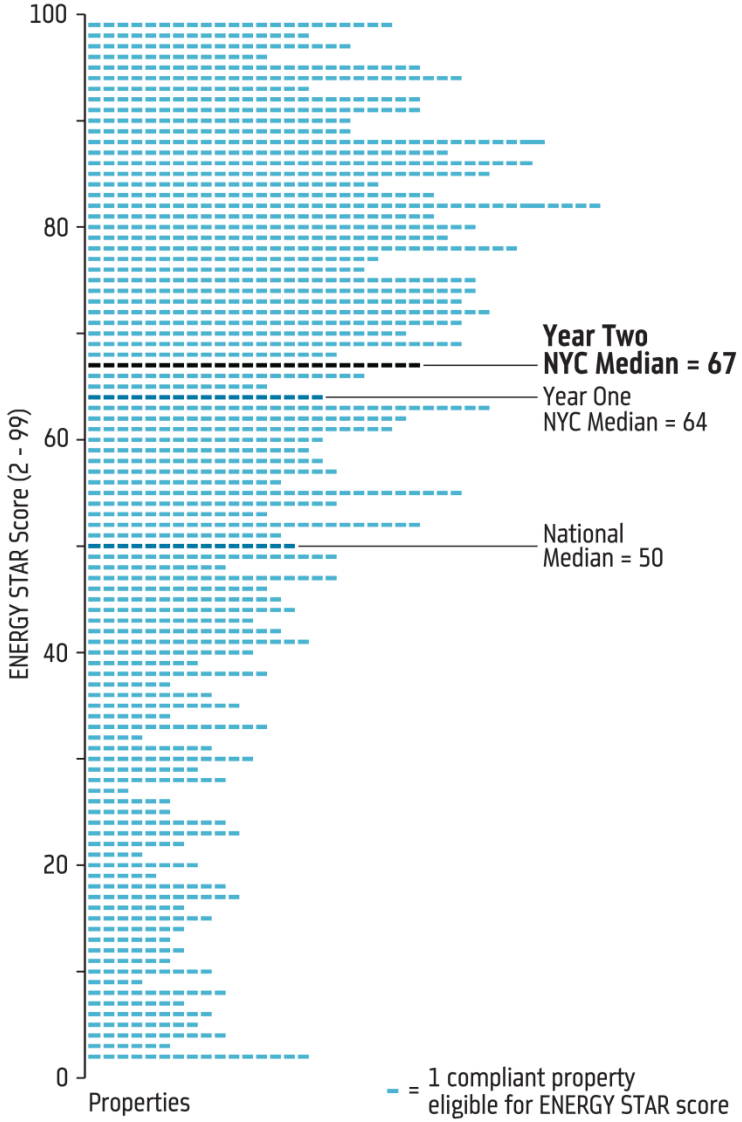
Through annual benchmarking and disclosure, properties are labeled with information publicly available at nyc.gov/ll84data



Street Number	Street Name	Borough	Zip	Benchmarking Submission	Entry Number	Site EUI(kBtu/ft2)	Weather Normalized Source EUI(kBtu/ft2)	Indoor Water Intensity (All Water Sources)(gal/ft2)	ENERGY STAR Score	Total GHG Emissions(MtCO2e)
1	GOVERNORS ISLAND	MANHATTAN	10004	No Record as of 08/1/13						
	MARGINAL STREET	MANHATTAN	10004	No Record as of 08/1/13						
	[illegible]	[illegible]	10004	Yes	41	102	287.9	16.37	75	25,932.68
125	BROAD STREET	MANHATTAN	10004	Yes	3871	119.6	261.5		70	11,637.42
134	AVENUE D	MANHATTAN	10009	Yes	8312	30.3	85.7	1.57	N/A	13,709.99
34	WHITEHALL STREET	MANHATTAN	10004	Yes	8575	99.5	302.6		55	7,771.16
17	STATE STREET	MANHATTAN	10004	Yes	735	79.7	210		[illegible]	4,033.53
24	WHITEHALL STREET	MANHATTAN	10004	Yes	93	139.4	[illegible]	1.06	41	10,308.19
33	WHITEHALL STREET	MANHATTAN	10004	Yes	641	134.5	432.9		36	5,068.06
90	BROAD STREET	MANHATTAN	10004	Yes	2711	39.8	118.2		90	1,405.66
1	WHITEHALL STREET	MANHATTAN	10004	Yes	90	102.8	244.4	17.9	67	2,939.91
[illegible]	[illegible]	[illegible]	10004	No Record as of 08/1/13						
535	MADISON AVENUE	MANHATTAN	10022	Yes	136	71.8	[illegible]	5.88	[illegible]	3,091.99
80	BROAD STREET	MANHATTAN	10004	Yes	12104	52.6	[illegible]		96	2,254.53
1	BROADWAY	MANHATTAN	10004	Yes	12928	65.7	[illegible]		[illegible]	1,241.58
11	BROADWAY	MANHATTAN	10004	Yes	638	80.1	[illegible]		78	3,030.18
15	WEST 67 STREET	MANHATTAN	10023	Yes	12382	62.4	91.8	8.92	N/A	330.36
17	BATTERY PLACE	MANHATTAN	10004	Yes	5502	28.7	99.6		N/A	3,419.27
17	BATTERY PLACE	MANHATTAN	10004	Yes	9917	50	143.8		N/A	[illegible]
20	WEST STREET	MANHATTAN	10004	Yes	2843	50.1	[illegible]		N/A	907.9
1,840	EAST 13 STREET	BROOKLYN	11229	Yes	7792	49.7	82.4	10.56	N/A	[illegible]
316	WEST 79 STREET	MANHATTAN	10024	Yes	1747	60.9	92.3	10.72	N/A	315.64
345	SOUTH END AVENUE	MANHATTAN	10280	Yes	10515	67.5	194.5		N/A	7,481.3
200	LIBERTY STREET	MANHATTAN	10281	Yes	45	111.2	249.7	11.53	88	[illegible]
250	VESEY PLACE	MANHATTAN	10282	Yes	47	31.4	288.2	26.78	[illegible]	28,565.59
20	RIVER TERRACE	MANHATTAN	10007	Yes	203	112.4	197.7	30.54	N/A	2,633.83
211	NORTH END AVENUE	MANHATTAN	10282	Yes	202	96.3	160.3	36.28	N/A	1,853.76
22	RIVER TERRACE	MANHATTAN	10282	Yes	517	70.3	134.6		N/A	1,613.33

Source: NYC Mayor's Office; www.nyc.gov/ll84

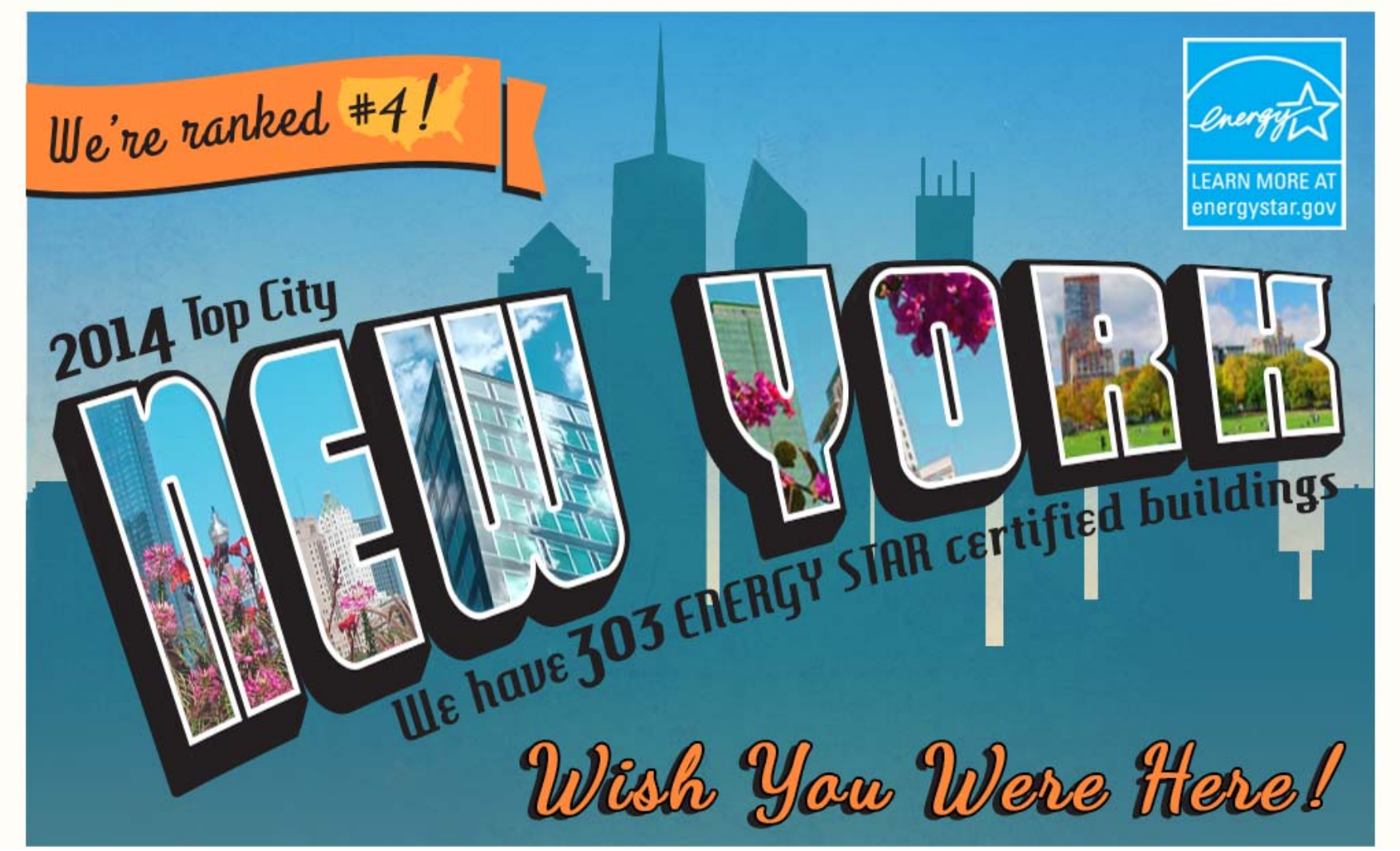
Annual analysis conducted by the City of New York reveals trends and context for public information



Source: University of Pennsylvania and NYC Mayor's Office

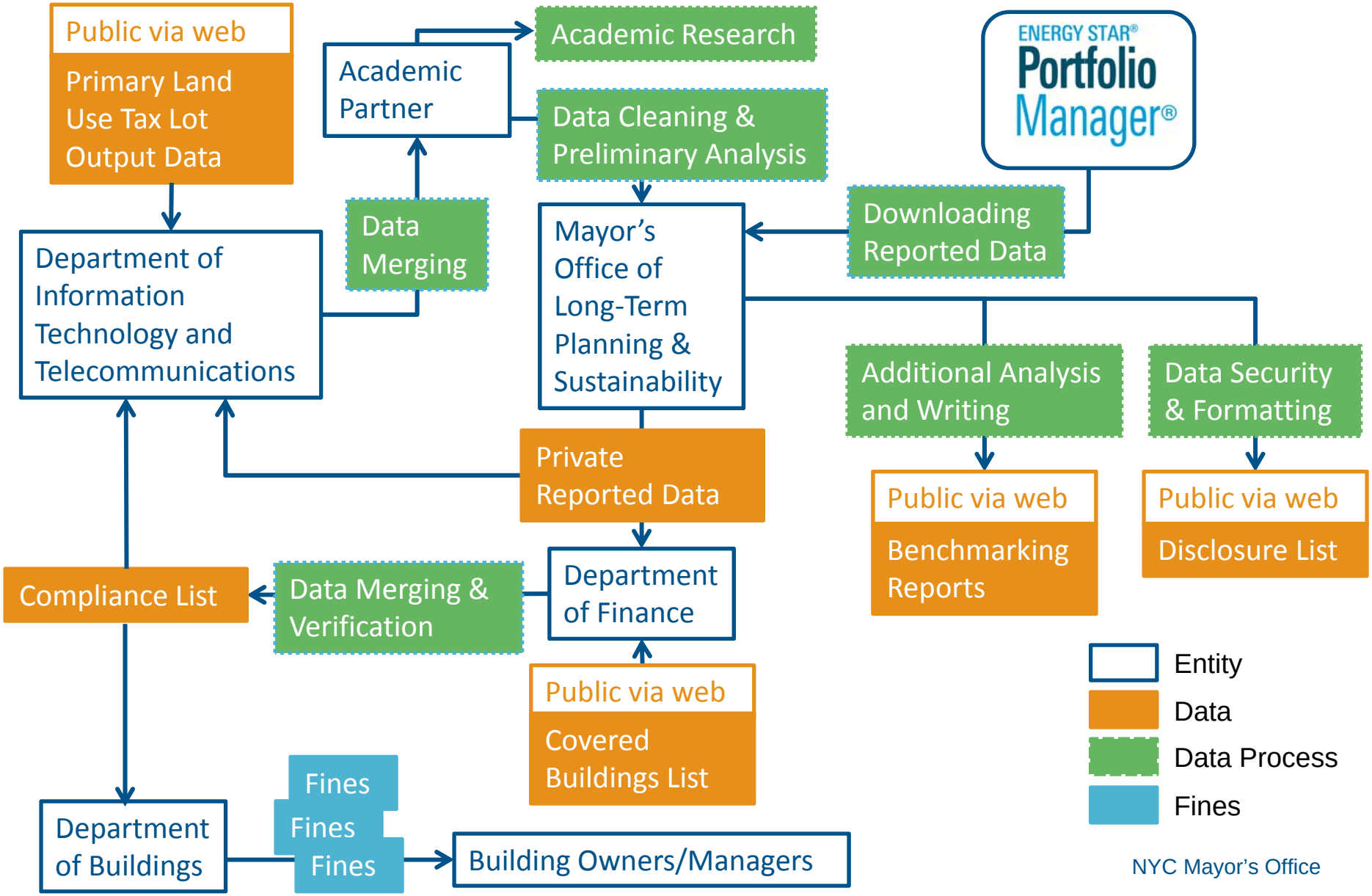
- Multifamily properties make up the majority of the largest buildings and use the most energy
- High energy users are also high water users
- Median citywide ENERGY STAR score increased and energy consumption decreased in the past three years, but there are a number of non-energy efficiency factors, including Hurricane Sandy, benchmarking tool upgrade, fuel switching, etc.
- 2014 Benchmarking report will be released in September 2014: www.nyc.gov/LL84data

Number of certified NYC buildings have increased since 2009; as of Sept 2014, multifamily buildings can now certify



Source: U.S. Environmental Protection Agency ENERGY STAR

Data Verification, Analysis, and Disclosure is Challenging and Complex



NYC Mayor's Office

Ongoing efforts must be supported with more information, financing, voluntary programs, education, and mandates

- **U.S. Department of Energy Asset Score program**
  - Evaluate building envelope; mechanical, electrical, and hot water systems to receive tailored retrofit recommendations
  - www.1.usa.gov/1qZvBAk

- **NYC Energy Efficiency Corporation**
  - Provides loans and enhances credit to undertake retrofits
  - www.nyceec.com

- **NYC Carbon Challenge**
  - Universities, hospitals, commercial offices, multifamily buildings sign on to reduce 30% emissions in 10 years
  - www.nyc.gov/carbonchallenges

- **Green Light New York**
  - Learning and presentation space for lighting
  - www.greenlightny.org

- **Local Energy Code, Audits and Retro-commissioning, Lighting Upgrades, Sub-metering (LL85, LL87, and LL88 of the Greener, Greater, Building Plan)**
  - Energy code is updated every 3 years; audits and retro-commissioning is required every 10 years; lighting upgrades and sub-metering are required by 2025
  - www.nyc.gov/ggbp

Public sector leadership is crucial to motivate energy efficiency in the private sector

- City of New York's goal for city buildings is 30% reduction by 2017
- Accelerated Conservation and Efficiency (ACE) program fast tracks funding for shovel-ready projects; expected to save $25M/year and reduce 50,000 $MTCO_2e$
- City properties annually disclose benchmarking data at www.nyc.gov/ll84data
- Additional programs promote efficient operations and maintenance, deploy innovative technologies, encourage competition among facility operators

Thank you!

www.nyc.gov/LL84data