





Who Me, a High Energy User?

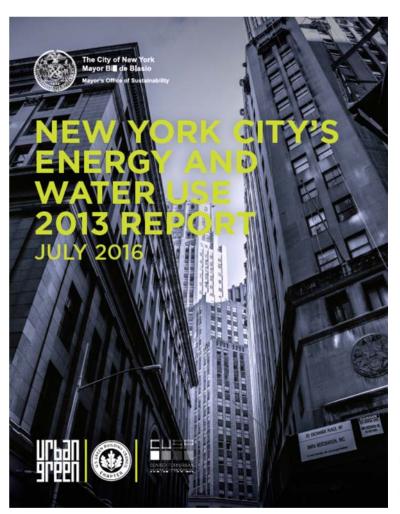
A Deep Dive into Tenant Energy Use in Multifamily Buildings

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David Klatt, VP, Logical Buildings
Rory Christian, Director New York Clean Energy, EDF

TOPICS

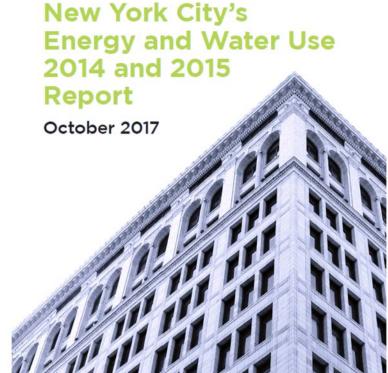
- 1. Breakdown of NYC resources
- 2. Multifamily utilities
- 3. Market rate rentals
- 4. Affordable rate rentals

BROAD, BUT NOT DEEP







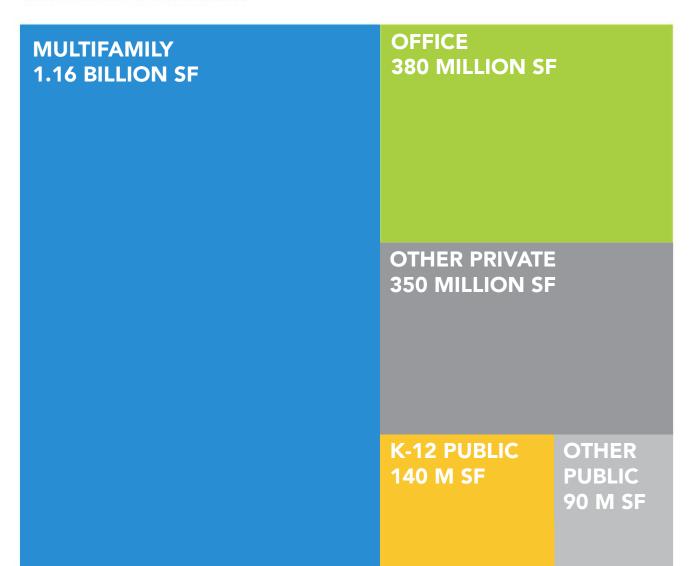


BIG BUILDINGS IN NYC

TOTAL GROSS FLOOR AREA (SF)

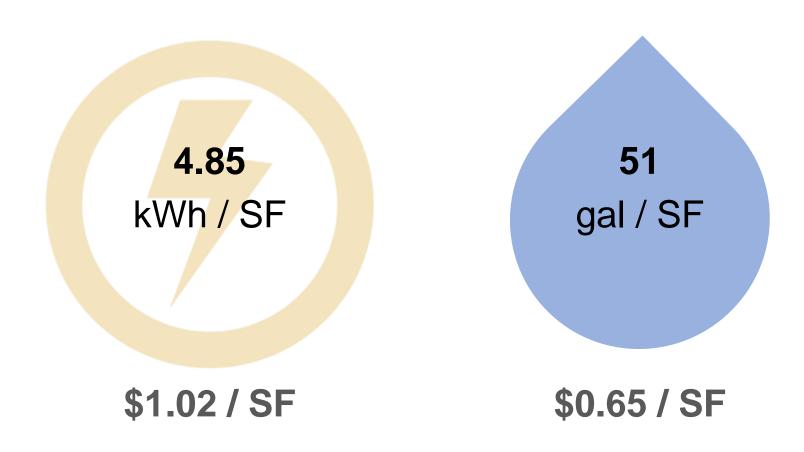
NYC has **5.4** billion SF building area

Nearly **93%** still here in 2050



INTENSITY and COST

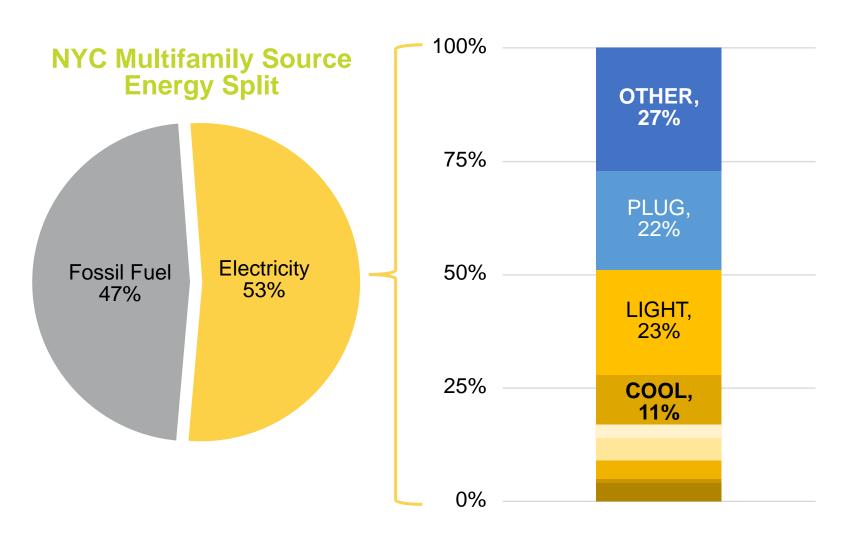
Annual large NYC multifamily building resource use



Source: LL84 benchmarked 2016 data, NYCWB Rate Schedule

ELECTRICITY

ELECTRICITY USES



Source: LL84 benchmarked 2016 data and LL87 audit data

ELECTRICITY USES

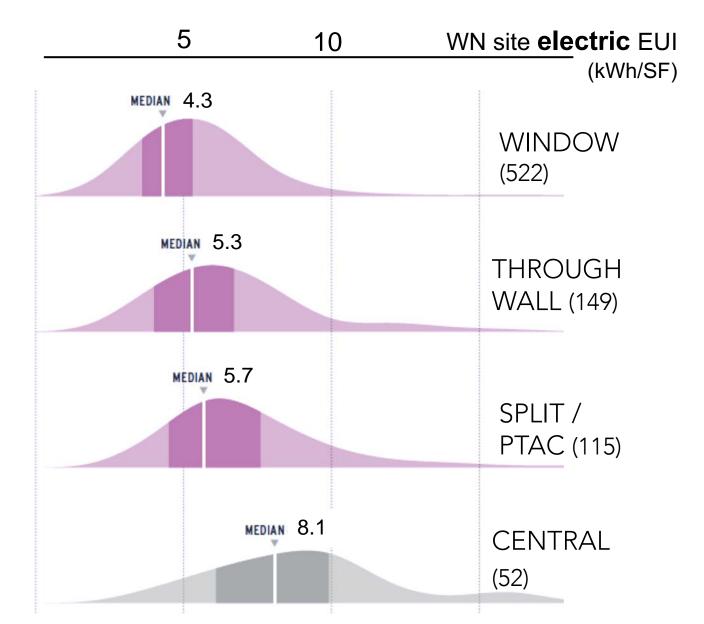


INFLUENCING FACTORS

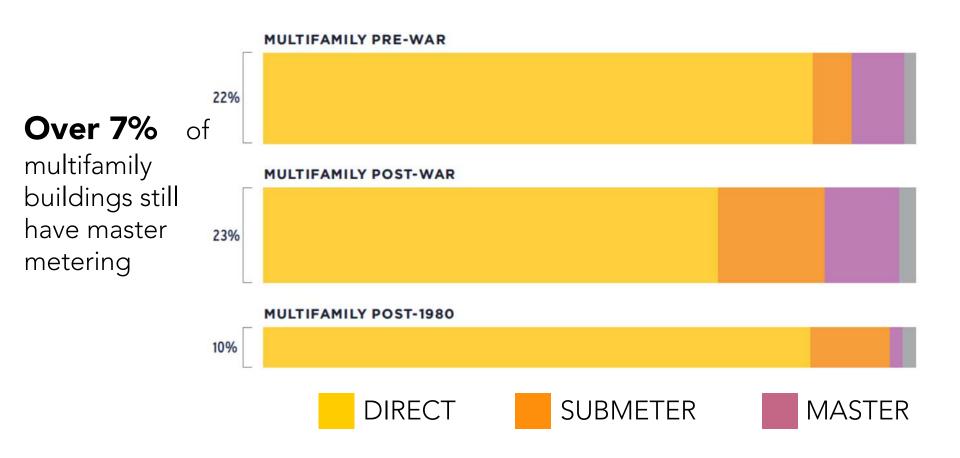
- 1. Central or modular cooling
- 2. Direct or master metering
- 3. Amenities

COOLING TYPES

Modularly cooled multifamily buildings used **40% less** than centrally cooled

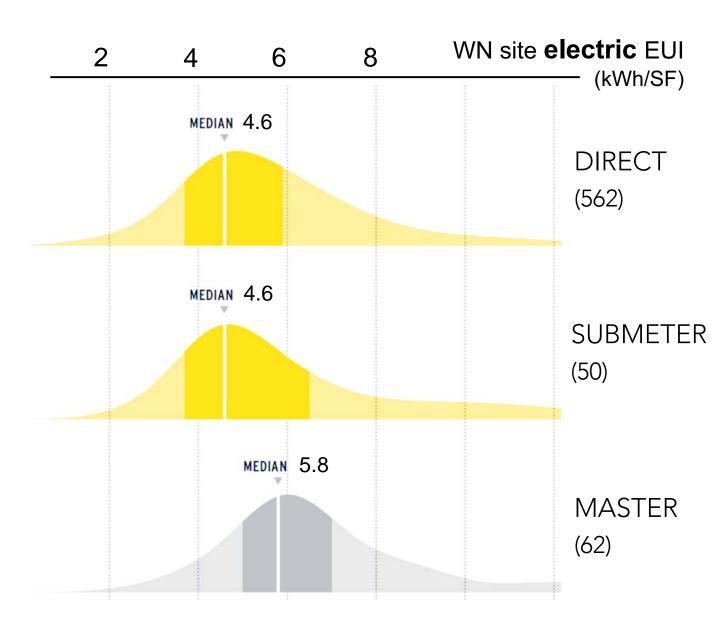


ELECTRIC METERING



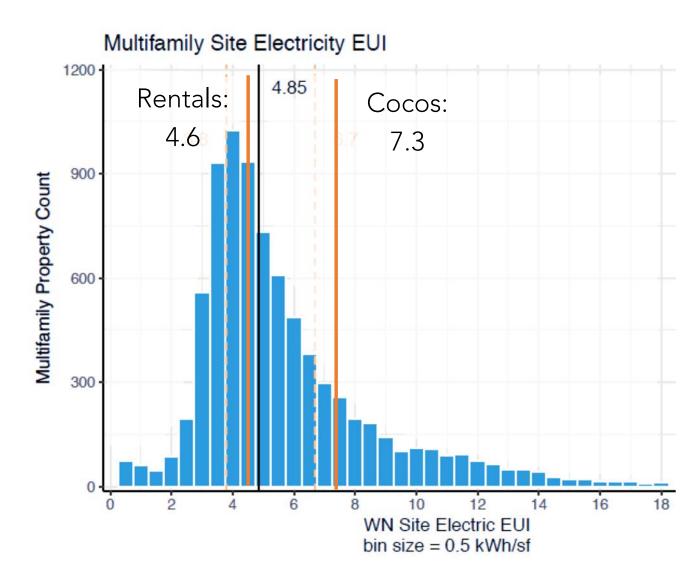
ELECTRIC METERING

Direct metered multifamily buildings used **20% less** than master-metered

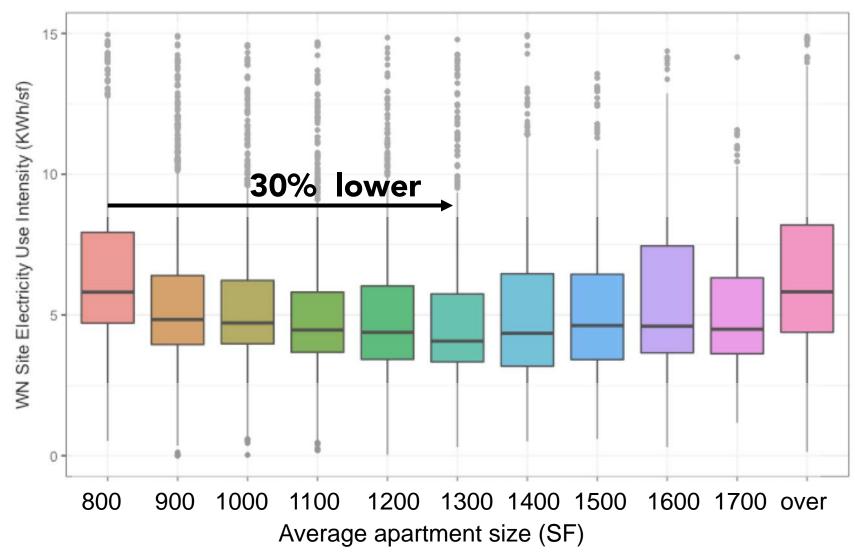


TENANT TYPE MATTERS

Condos and co-ops use 58% more electricity than rental buildings



TENANT ELECTRICITY



Source: LL84 benchmarked 2016 data

WATER

WATER USES

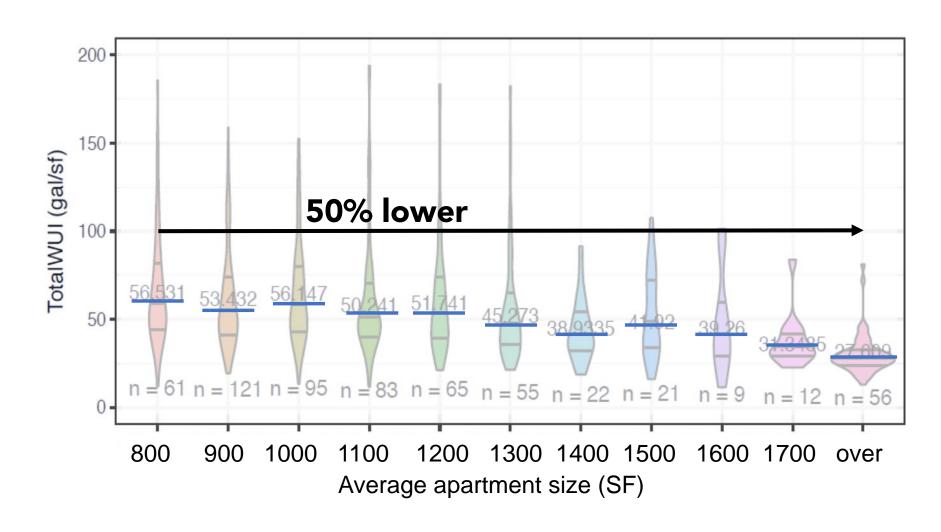


INFLUENCING FACTORS

- 1. Tenant tap
- 2. HVAC equipment
- 3. Outdoor and cleaning

Source: LL84 benchmarked 2016 data

WATER INTENSITY



Source: LL84 benchmarked 2016 data

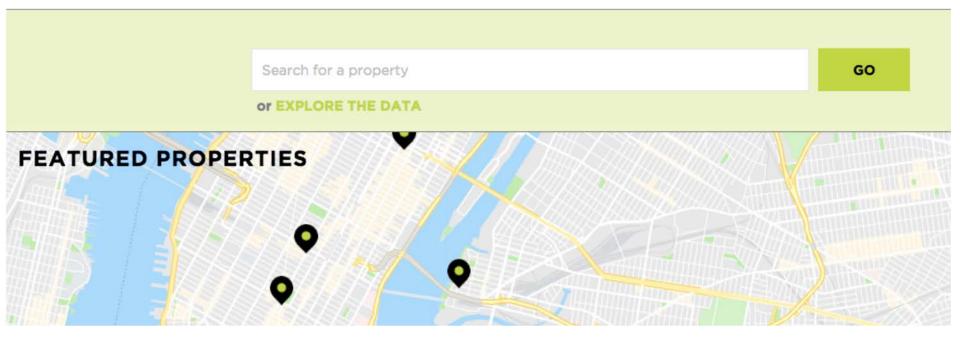
NEXT STEPS

- Areas to focus on with tenants:
 - 1. Metering feedback
 - 2. Lighting upgrades
 - 3. Cooling control
- Tenant data direct from the utility
- Are auditor assumptions correct?
- How are tenants billed and how much could be saved?









Thank you