Mandatory Benchmarking in the US and NYC

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Buildings, cities, and climate change
The building sector is the dominant user of energy and generator of CO₂ emissions in the U.S. This is more true in cities due to density.
Link between codes and energy performance policy

Energy Codes

Construction | Operation | Renovation | Operation

Energy Performance Policy
The City Energy Project: Improving the energy efficiency of existing buildings in major American cities

3 major funders and a partnership of 2 organizations

Bloomberg Philanthropies

Doris Duke Charitable Foundation

The Kresge Foundation

IMT Institute for Market Transformation

NRDC The Earth’s Best Defense
The City Energy Project: Addressing climate change at the local level
Building Performance Policies
Rating and transparency drives demand and competition
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A virtuous cycle

1. Ratings for all buildings
2. Ratings disclosed to market
3. Market compares building performance
4. Owners improve efficiency to help competitiveness
5. Efficiency of existing building stock continuously improves
6. Market rewards energy-efficient property with more business
U.S. benchmarking policy landscape

U.S. Building Benchmarking and Transparency Policies

- **Commercial policy adopted**
- **Commercial & multifamily policy adopted**
- **Public buildings benchmarked**
- **Single-family transparency adopted**

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Totaling approximately 6.6 billion SF of floor space in major real estate markets.
Building energy efficiency represents the greatest opportunity to reduce citywide GHG emissions

- More than 70% of NYC’s GHG emissions come from the energy used in buildings
- At least 80% of the buildings that are here today will still be here in 2050

Source: NYC Mayor’s Office of Sustainability
Reducing New Yorkers’ utility costs can also help preserve housing affordability

- As of 2014, **56% of renter households in NYC are “rent burdened,”** or paying 30% or more of household income on gross housing costs.

- **Utility costs have increased by 20%** since 2002. **Fuel costs have doubled** in the same period.

- **Utilities & fuel account for 24% of operating costs** in residential rental buildings.

Number of Rent-Burdened Households; Median Monthly Utility Costs

Source: NYC Mayor's Office of Sustainability
Benchmarking allows owners and occupants to understand their buildings’ operational performance

Owners that benchmark their buildings gain the following benefits:

1. Baseline understanding of their building’s energy use
2. Metrics to rank their building against others in their portfolio, allowing prioritization of energy efficiency investments
3. Better understanding of how their buildings’ energy performance compares to competitors
4. Basis of an energy management plan to drive continuous performance improvement
5. For high performers, evidence of their building’s additional value

Source: Institute for Market Transformation
The **Greener, Greater Buildings Plan** is a package of laws passed in 2009 that provide large buildings with information about their energy use and requires cost-effective upgrades.

- **LL85 – NEW YORK CITY ENERGY CODE**
  - Closes a loophole in the state code, allowing New York City to accrue the energy benefits of incremental upgrades

- **LL84 – BENCHMARKING**
  - Annually submit energy and water consumption to City

- **LL87 – ENERGY AUDITS AND RETRO-COMMISSIONING**
  - Complete an energy audit and retro-commission according to check-list provided by the City on staggered 10-year schedule

- **LL88 – LIGHTING UPGRADES AND SUB-METERING**
  - Upgrade lighting systems in all common area commercial spaces to meet requirement of energy code
  - Install sub-meters on floors over 10,000 sq. ft. and disclose to tenants

*Source: NYC Mayor’s Office of Sustainability*
BENCHMARK:
To input and submit to the benchmarking tool the total use of energy and water for a building for the previous calendar year and other descriptive information for such building as required by the benchmarking tool.

COVERED BUILDING:
• a building that exceeds 50,000 gross square feet;
• two or more buildings on the same tax lot that together exceed 100,000 gross square feet

CITY BUILDING:
• a building that exceeds 10,000 gross square feet;
• that is owned by the city or for which the city regularly pays all or part of the annual energy bills
Portfolio Manager is an interactive energy management tool that allows you to track and assess energy and water consumption across your entire portfolio of buildings in a secure online environment.

**Portfolio Manager can be used by all organizations to:**
- Establish a baseline energy performance for each property using Portfolio Manager.
- Set goals for energy performance.
- Prioritize investments.
- Conduct ongoing measurement and verification of improvements—both financial and environmental.
- Earn recognition from EPA, BOMA, ASHE, and others for environmental and operational excellence.

*Source: EPA*
Through the Better Buildings Energy Data Accelerator local governments are joining forces with their local utilities to make it easier for building owners to get access to whole-building energy usage data for the purposes of benchmarking their buildings.
NJIT Certificate of Proficiency in Benchmarking®

Online training developed by US EPA, US DOE, and a coalition of national and local organizations

Benefits include:

- Free online interactive training with practice quizzes
- Verified and easy to understand training in accurate benchmarking
- Same process to meet Local Law 84 requirements
- Certificate of Proficiency in Benchmarking® good for two years
- National Building Benchmarkers Registry

Source: NJIT
The New York City Benchmarking Help Center will help building owners report their energy and water data for compliance with Local Law 84.

Help Center staff are prepared to assist with the following:

- Interpreting Local Law 84
- Navigating EPA Energy Star Portfolio Manager
- Improving data quality in submissions
- Retrieving data from utility companies
- Submitting benchmarking reports to NYC
- Resolving any questions or problems

Email: Questions@benchmarkinghelpcenter.org
Phone: 212-566-LL84 (212-566-5584)
Website: www.nyc.gov/LL84

Source: BHC