

## Benchmarking Energy Use

### Chicago, IL

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Buildings are big energy consumers. Inefficient buildings can be a significant drain on the grid, which can trigger electrical brownouts and blackouts during peak usage times. In 2013, Chicago became the ninth U.S. city to pass an ordinance requiring large buildings to track their energy use. Chicago's City Council approved the proposal from Mayor Rahm Emanuel to create the Chicago Energy Benchmarking program, which establishes requirements for all commercial, residential and municipal buildings larger than 50,000 square feet to monitor and publicly report their energy use.



Image from [www.greenurbancouncil.org](http://www.greenurbancouncil.org)

Energy benchmarking poses little cost to the city and positions building owners and tenants to make more informed energy choices, which can then feed a regional green jobs industry. “Good data drives markets and innovation,” Mayor Emanuel asserts. “This ordinance will accelerate Chicago’s growth as a capital for green jobs by arming building owners, real estate companies, energy service companies and others with information they need to make smart, cost-saving investments.”

The primary goal is to promote better energy decisions by highlighting the amounts of energy the biggest buildings in the city are using and the potential large savings that could be achieved through energy efficiency measures. Another goal is to spur jobs in the green energy sector as the market for energy efficiency grows.

About 3,500 buildings – less than 1% of the city’s building stock – are required to comply with the energy benchmarking program, but these structures account for roughly 20% of the city’s energy use. According to the Alliance to Save Energy, buildings are responsible for 71% of Chicago’s carbon emissions, and if the largest buildings begin to use energy more efficiently, the city may reach its climate goal of reducing greenhouse gas emissions 25% by 2020 compared to 1990 levels. Compliance started in June 2014 for municipal and commercial buildings and June 2015 for residential buildings.

Energy use will be reported using the Energy Star Portfolio Manager (link below). According to the U.S. Environmental Protection Agency, buildings using this tool have average energy cost savings of 7%. All energy use data will be made publicly available. Figures must be audited and verified every three years by an engineer, architect, or other energy professional approved by the City.

Building owners must carry their own costs for monitoring, reporting and verifying energy use, but there are provisions to help buildings under financial distress and buildings with occupancy below 50%. The city provides free training sessions for building owners and a hotline for questions regarding the program. Newly constructed buildings are not required to report their energy use because the City requires all new constructions to meet the 2015 International Energy Conservation Code standards.

This ordinance only mandates the reporting of energy use, not the implementation of energy efficiency improvements, but the public sharing of records may be enough to spark change. Building owners will be able to compare their energy use with that of similarly sized buildings, allowing efficiency comparisons. Prospective tenants, buyers, and investors will have the ability to see which buildings have higher energy costs. This information will help drive the market towards more energy efficient buildings. The implementation of the program will be phased in over two years on the following schedule:

Other cities requiring energy benchmarking include Washington, D.C., Seattle, Boston, and Minneapolis (links below). Boston and D.C. include water use as part of their benchmarking programs, and Seattle requires all buildings over 20,000 square feet to report energy usage. Otherwise, the programs across the nation are fairly similar.

**Chicago's ordinance on energy benchmarking:** <http://www.usgbc-illinois.org/wp-content/uploads/2013/06/Chicago-Energy-Use-Benchmarking-Ordinance-Substitute.pdf>

**Chicago Energy Benchmarking Web Site:**

<http://www.cityofchicago.org/city/en/progs/env/building-energy-benchmarking---transparency.html#support>

**Energy Star Portfolio Manager:** <http://www.energystar.gov/buildings/facility-owners-and-managers/existing-buildings/use-portfolio-manager>

- **Washington, D.C.'s program:**  
<http://green.dc.gov/energybenchmarking>
- **Seattle's program**  
<http://www.seattle.gov/environment/buildings-and-energy/energy-benchmarking-and-reporting>
- **Boston's program**  
<http://www.cityofboston.gov/eeos/reporting/>
- **Minneapolis' program**  
<http://www.ci.minneapolis.mn.us/environment/energy/>

## **S U B S T I T U T E** **O R D I N A N C E**

### **BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF CHICAGO:**

**SECTION 1.** Title 18 of the Municipal Code of Chicago is hereby amended by adding a new Chapter 18-14, as follows:

#### **Chapter 18-14. Building Energy Use Benchmarking**

##### **18-14-101 General.**

##### **18-14-101.1 Title.**

This Chapter 18-4 of Title 18 shall be known as the Building Energy Use Benchmarking Ordinance of the City of Chicago, and shall be cited as such. It is referred to herein as “this chapter.”

##### **18-14-101.2 Scope.**

This chapter applies to all covered buildings.

##### **18-14-101.3 Definitions.**

For purposes of this chapter the following definitions shall apply:

“Benchmark” means to track and input a building’s energy consumption data and other relevant building information for twelve consecutive months, as required by the benchmarking tool, to quantify the building’s energy use.

“Benchmarking tool” means the website-based software, commonly known as “ENERGY STAR Portfolio Manager,” developed and maintained by the United States Environmental Protection Agency to track and assess the relative energy use of buildings nationwide. This term also applies to any successor system thereto, including any change or addition made to such tool by the United States Environmental Protection Agency.

“Building” means a structure, or part thereof, enclosing any use or occupancy.

“Certificate of occupancy” means the certificate issued by the zoning administrator or the building commissioner allowing building occupancy or use.

“Commissioner” means the city’s commissioner of business affairs and consumer protection.

“Covered building” means any Group 1 covered building or Group 2 covered building, as defined by this chapter. The term “covered building” does not include any building with more than 10 percent occupancy use classified as Class D open air assembly units, Class G industrial units, Class H storage units, Class I hazardous use units, or Class J miscellaneous buildings and structures, as defined by Chapter 13-56.

“Data center” means a space specifically designed and equipped to meet the needs of high density computing equipment such as server racks, used for data storage and processing, as defined by the benchmarking tool.

“Energy performance score” means the 1 to 100 numerical score produced by the benchmarking tool, also known as ENERGY STAR score, or any successor score thereto. The energy performance score assesses a building’s energy performance relative to similar buildings, based on source energy use, operating characteristics, and geographical location.

“Energy use intensity” or “EUI” means a numeric value calculated by the benchmarking tool that represents the energy consumed by a building relative to its size.

“Group 1 covered building” means any building or group of buildings that have the same property identification or index number (PIN), containing 250,000 or more gross square feet, as identified by the commissioner.

“Group 2 covered building” means any building or group of buildings that have the same property identification or index number (PIN), containing 50,000 or more gross square feet but less than 250,000 gross square feet, as identified by the commissioner.

“Gross square feet” means the total number of square feet measured between the exterior surfaces of the enclosing fixed walls of a building. The term “gross square feet” includes vent shafts, elevator shafts, flues, pipe shafts, vertical ducts, stairwells, light wells, basement space, mechanical or electrical rooms, and interior parking.

“Licensed professional” means a professional engineer or a registered architect licensed in the State of Illinois, or another trained individual as prescribed by rule.

“Owner” has the meaning ascribed to the term in Section 13-4-010.

“Reported benchmarking information” means descriptive information about a building, its operating characteristics, and information generated by the benchmarking tool related to the building’s energy consumption and efficiency, as prescribed by rule. Reported benchmarking information includes, but is not limited to, the building identification number, address, square footage, energy performance score, energy use intensity, and annual greenhouse gas emissions.

“Residential occupancy” means any building occupancy use classified as any combination of Class A residential units, as defined by Chapter 13-56.

#### **18-14-101.4 Solicitation of compliance information.**

Within 30 days of a request by the building owner, each tenant of a unit in a covered building shall provide all information that cannot otherwise be acquired by the building owner and that is necessary for the building owner to comply with the requirements of this chapter.

Any owner of a covered building shall request such information no later than March 1 of the years in which benchmarking is required by Section 18-14-102.1. If the owner of a covered building receives notice that a tenant intends to vacate a unit which is subject to the requirements of this section, the owner shall request the information specified in this section within 10 days of such notice, and the tenant shall provide such information within 30 days of the request.

The failure of any tenant to provide the information required under this section to the owner of a covered building shall not relieve such owner of the obligation to benchmark the building as provided in Section 18-14-102.1, using all information otherwise available to the owner.

Failure of any tenant to provide the information required under this section to the owner of a covered building shall create a rebuttable presumption that the owner, tenant, or both have not complied with the time limits specified in this section.

If a tenant of a unit in a covered building fails to provide information to the owner of the building as provided in this section, the owner shall be considered to be in compliance with Section 18-14-102.1 with respect to the building if: (1) the owner proves that the owner has requested the tenant to provide such information as specified in this section; and (2) the owner has benchmarked the building as provided in Section 18-14-102.1, using all information otherwise available to the owner.

#### **18-14-101.5 Enforcement.**

(a) The commissioner is authorized to enforce this chapter. The commissioner is also authorized to adopt rules and regulations for the proper administration and enforcement of this chapter.

(b) Any person who violates this chapter may be subject to a fine of up to \$100.00 for the first violation, and an additional fine of up to \$25.00 for each day that the violation continues.

#### **18-14-102 Energy use benchmarking, verification, and disclosure requirements.**

##### **18-14-102.1 Benchmarking.**

(a) No later than June 1, 2014, and no later than June 1<sup>st</sup> each year thereafter, the owner of any Group 1 covered building shall benchmark such building for the previous calendar year; provided, however, the owner of any Group 1 covered building with 10 percent or more residential occupancy shall benchmark such building for the previous calendar year no later than June 1, 2015, and no later than June 1<sup>st</sup> each year thereafter.

(b) No later than June 1, 2015, and no later than June 1<sup>st</sup> each year thereafter, the owner of any Group 2 covered building shall benchmark such building for the previous calendar year; provided, however, the owner of any Group 2 covered building with 10 percent or more residential occupancy shall benchmark such building for the previous calendar year no later than June 1, 2016, and no later than June 1<sup>st</sup> each year thereafter.

(c) The owner of any covered building shall retain all information tracked and input into the benchmarking tool for a minimum of three years beyond the date on which benchmarking was required.

**Exception:** The commissioner may exempt from the benchmarking requirement the owner of a covered building that submits documentation, in a form prescribed by rule, establishing any of the following:

(i) The building is presently experiencing qualifying financial distress, as defined by any of the following: (1) the building is the subject of a qualified tax lien sale or public auction due to property tax arrearages, (2) the building is controlled by a court appointed receiver, or (3) the building has been acquired by a deed in lieu of foreclosure; or

(ii) The building had average physical occupancy of less than 50 percent throughout the calendar year for which benchmarking is required; or

(iii) The building is a new construction and the building's certificate of occupancy was issued during the calendar year for which benchmarking is required.

#### **18-14-102.2 Data Verification.**

Prior to the first benchmarking deadline prescribed by Section 18-14-102.1, and prior to each third benchmarking deadline thereafter, the owner of a covered building shall ensure that reported benchmarking information for that year is verified by a licensed professional. Such verification shall be in a form of a stamped and signed statement by a licensed professional attesting to the accuracy of the information. The owner of a covered building shall produce such statement for the most recent year in which verification of reported benchmarking information was required, in a form prescribed by rule, upon a written request by the commissioner.

**Exception:** The commissioner may exempt from the verification requirement the owner of a covered building that submits documentation, in a form prescribed by rule, establishing that compliance with this section will cause undue financial hardship. If no-cost or low-cost verification options are available, the commissioner may suggest that the covered building use such alternative options.

#### **18-14-102.3 Disclosure.**

(a) In accordance with the schedule prescribed by Section 18-14-102.1, the owner of any covered building shall submit reported benchmarking information for the previous calendar year, using the benchmarking tool, in a manner prescribed by the commissioner.

(b) The commissioner and the chief sustainability officer shall prepare and submit an annual report to the mayor and the city council reviewing and evaluating energy efficiency in covered buildings, including summary statistics on the most recent reported energy benchmarking information and a discussion of energy efficiency trends, cost savings, and job creation effects resulting from energy efficiency improvements.

(c) The commissioner is authorized to make reported benchmarking information readily available to the public.

**Exception:** To the extent allowable under applicable law, the commissioner shall not make readily available to the public any individually-attributable reported benchmarking information from the first calendar year that a covered building is required to benchmark.

**Exception:** To the extent allowable under applicable law, the commissioner shall not make readily available to the public any individually-attributable reported benchmarking information pertaining to a covered building that contains a data center, television studio, or trading floor that together exceed ten percent of the gross square footage of any such building until the commissioner determines that the benchmarking tool can make adequate adjustments for such facilities. When the commissioner determines that the benchmarking tool can make such adjustments, it shall report such determination to the mayor and the city council.

**SECTION 2.** This ordinance shall take effect 10 days after passage and publication.