

The Empire State Building Takes Leadership Role In Energy and Cost Savings for Tenants

A Case Study: How Skanska Achieved \$680,000 in Energy Savings and Expects to Save Even More with ESB's Energy Efficiency Program

On April 5, 2009, President Bill Clinton, New York Mayor Michael Bloomberg, and W&H Properties' Empire State Building (ESB) unveiled a new model for economically viable, replicable energy retrofits for existing buildings to reduce materially energy consumption, operating costs, and carbon footprint. In this, our third of four publications, we illustrate the experiences of one tenant, sharing its no-compromise energy efficiency and the measurement of its cost savings within its first year of occupancy at ESB.

Skanska USA, one of the largest, most financially sound construction networks in the country, relocated its flagship office to ESB from a nearby address on Madison Avenue in December 2008, taking the entire 32nd floor totaling 25,000 rentable square feet.

In planning its relocation, Skanska committed to designing and building a state-of-the-art, energy efficient office space to reduce its energy costs and carbon footprint; provide a healthier, more productive environment for its employees; and demonstrate the economic argument behind energy efficiency in office space design and construction.

Periodically, Skanska releases updated studies on its new installation. Skanska's Empire State Building office benefits from a 57 percent reduction in its electricity costs compared with its prior office - an energy reduction of \$1.98 per square foot.



This translates to a total savings of approximately \$680,000 for energy costs over the life of Skanska's 15-year lease. After salaries and rent, electricity is the largest cost of office occupancy, and the easiest to control and reduce.

Importantly, Skanska's Empire State Building office is a high performance tenant fit-out with no compromises. It is no darker, no hotter, no colder than any other traditional tenant space. In addition, based on the reduction in energy use from 326,595 total kilowatt hours to 141,383 kilowatt hours and reduction in the cost of energy use per square foot from \$3.49 per rentable square foot to \$1.51

per rentable square foot, Skanska projects a carbon footprint reduction of nearly 80 tons per year. Moreover, initial indicators, such as a reduction in sick-days taken, suggest the new workspace may have also enhanced workplace productivity.

Skanska's fantastic results are based on measurements before the Empire State Building retrofitted its windows and added insulation

between radiators and the building's perimeter curtain wall. Skanska will save even more by having chosen to relocate to the Empire State Building. In addition to the benefits received from ESB's energy reduction and upgrade programs, the building's original 1930 design played a significant role in its ability to help Skanska create a better work environment with energy efficiency built in.

ESB also provides all new tenants over 2,500 square feet with sub-metering to determine electrical consumption. All sub-metered spaces will have access to ESB's customized Tenant Energy Management System that supplies instant feedback to measure and control usage, and provides actionable recommendations for improvements in efficiency.

Any tenant can achieve the results that Skanska and its employees enjoy every day. In addition to the ESB's ability to help deploy the energy efficient designs and technologies used in Skanska's offices, by choosing the ESB all tenants benefit from our on-going energy efficiency retrofit program and \$550 million building upgrade and modernization, featuring retrofitted windows,

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improved perimeter insulation, and a state-of-the-art building management system and HVAC infrastructure, with the world's largest wireless BMS (Building Management System) network. The BMS

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manages climate control, providing fresh, clean air throughout every floor, with four individual air handling units per floor to enhance temperature and comfort control for tenants.

The building's center core design and extensive, oversized windows provide a high window-to-floor ratio that facilitates an efficient layout and creates an abundance of natural light. Skanska maximized the use of natural light by designing a space layout with glass-front offices located along the core and open workstations located on the perimeter. Skanska took measures further with the installation of an under-floor air distribution system which allows for open ceilings and increases the amount of natural light available and improves the views for the occupants. (In Skanska's build-out, 90 percent of its office space receives daylight, in addition to the fact that virtually all employees have exterior views, unhindered by nearby buildings).

A case study of Skanska's office project published by McGraw-Hill's Construction News says the building's original design "actually made the project easier." In the article, Skanska elaborates on that observation: "One of (the building's) original design parameters was that no corridor wall could be more than 28 feet from the windows, so it relied on natural light to provide most of the illumination. Similarly, the windows, because of that, were oversized. They are operable windows, for natural ventilation."

In addition to the use of natural light and fresh air, Skanska created a healthier, more productive working environment for its employees by using a pressurized, under-floor ventilation system to distribute fresh, clean air throughout the office and also

allow employees to control individually the temperature within their personal work spaces. Other features of the space include a lighting control system that automatically dims perimeter lights based on available natural light, occupancy motion sensors, waterless urinals, and the use of low-VOC (volatile organic compounds) and recycled content materials.

Lastly, ESB's location in the heart of Midtown Manhattan - equidistant from Grand Central Terminal, Penn Station and the Port Authority and near virtually every major subway line, PATH train and crosstown and Fifth Avenue buses - facilitates an efficient, sustainable commute with easy access to services and amenities for Skanska's employees. All these factors and Skanska's intelligent design execution allowed Skanska's ESB office to be certified LEED Platinum, the highest level of certification under the US Green Building Council's LEED Rating System.

Can choosing a building with an ownership committed to energy efficiency make a difference for a tenant with a corporate sustainability mandate? As demonstrated by Skanska's experience during the first year of occupancy, tenants at ESB can lower operating costs, reduce their carbon footprint, and provide a healthier, more productive work environment for their employees.



ESB's ownership has the ability to make the building a world leader in energy efficiency and sustainability because of our long-term financial stability with over 75 years of prudent, successful real estate investment and asset management. At ESB and at all W&H Properties buildings supervised by Malkin Holdings, tenants enjoy the peace of mind and security in knowing that their landlord will meet every one of its obligations for the entire term of the lease.

Shouldn't you and your clients consider the Empire State Building? For more information, contact William G. Cohen at 212-372-2233, or wcohen@newmarkkf.com. You can also learn more by visiting www.esbnyc.com and www.esbsustainability.com.

Thank you for giving us the chance to compete for your business. At W&H Properties, tenant and broker satisfaction is our number one priority. (And remember, brokers always receive 100 percent of their commissions on lease signing.)



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