

NYSERDA EMPIRE BUILDING CHALLENGE

April 2021



COMPANY OVERVIEW



For over 100 years, The Durst Organization has been a family-owned business dedicated to the principles of innovation, integrity, community, and sustainability. We develop, build, own, and manage premier office towers and residential buildings that set new standards in environmental responsibility, comfort, service, and efficiency. Since its founding in 1915 by Joseph and Rose Durst, The Durst Organization has been a pioneer committed to innovation in construction and design. The Durst Organization owns and manages 13 million square feet of Class A office and retail space and over three million square feet of residential rental properties, with over 2,300 apartments built and another 3,500 in the pipeline.

The primary goal of all our developments is to create unique spaces in the urban built environment that foster dynamic communities and sustain our residents' and tenants' capacity to thrive. Green buildings are healthier buildings that increase productivity and reduce absenteeism. With everything from cleaning products to green roofs, beehives, organic composting, and a 4.6-Megawatt cogeneration Plant, sustainable practices are integral to every project The Durst Organization undertakes.

TRACK RECORD

with Green/Sustainability and EBC Carbon Commitment

When The Durst Organization develops a new property, we retain it in our family-owned portfolio in perpetuity. Developing from the ground up for permanent ownership informs every decision we make regarding quality, efficiency, sustainability, and support of the communities we serve. This long-term approach has resulted in an unparalleled list of environmental benchmarks, known as Durst Firsts.

- One Bryant Park is the world's first skyscraper to achieve LEED Platinum certification.
- One Five One (151 West 42nd Street) is recognized as the world's first green skyscraper.
- 1133 and 1155 Avenue of the Americas were the two first LEED Silver certified commercial buildings in New York City under the LEED v4 Existing Buildings: Operations + Maintenance.
- 114 West 47th Street is the first LEED Gold certified building under the LEED v4 Existing Buildings: Operations + Maintenance.
- One World Trade Center is the largest LEED certified building in the Western Hemisphere. The tower achieved LEED Gold v2.0 Core + Shell.
- 1155 Avenue of the Americas installed the first thermal ice storage air conditioning system in New York City.
- The Durst Organization is the first commercial building owner in New York City to offer tenants complimentary organics waste collection services. The food waste is collected and sent to a Durst-owned local organic farm (McEnroe Organic Farm) for composting. The resulting nutrient-rich material is returned for use on the green roofs atop the buildings such as 733 Third Avenue where the food waste originated.



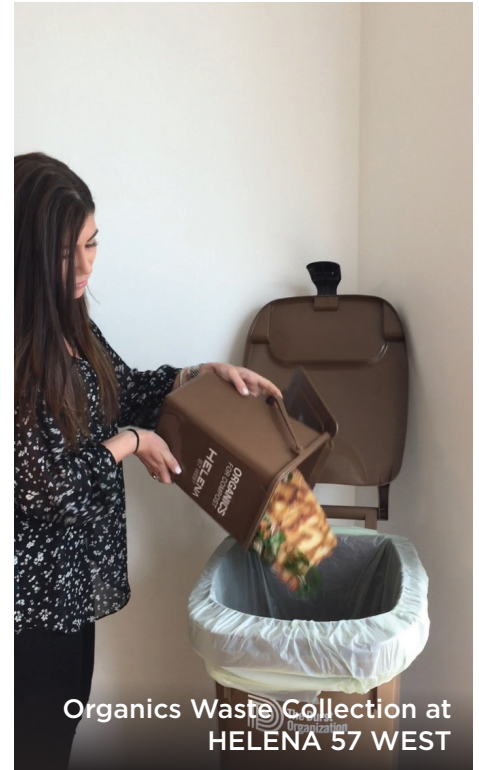
- The HELENA 57 WEST is Manhattan’s first high-rise residential building to launch an organics waste collection program. The New York City Department of Sanitation in collaboration with The Durst Organization piloted residential organics waste collection at the HELENA. The success of the pilot program at The HELENA paved the way for expanded residential curbside organics waste collection throughout New York City.
- Earning LEED Gold status, HELENA 57 WEST is New York City’s first voluntary, LEED-certified residential building.

TARGETED METHODS TO ACHIEVING CARBON NEUTRALITY BY 2035

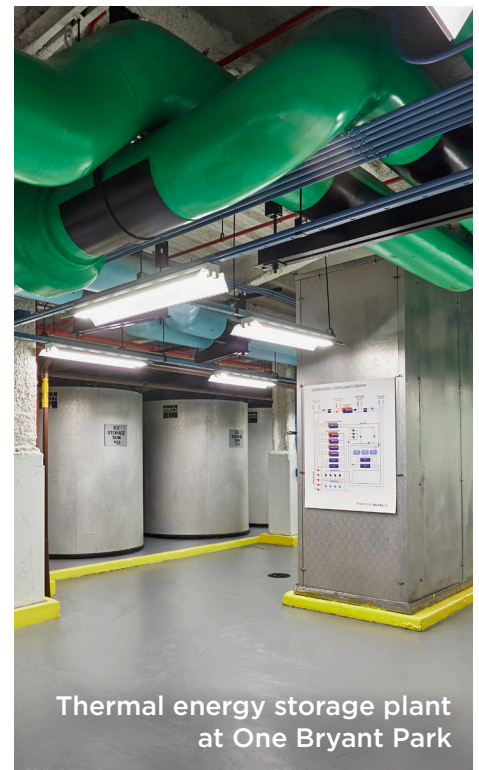
- Reduce energy use through energy efficiency measures
- Energy storage to reduce peak demands
- Invest in/construct local renewable generation
- Purchase RECs for remaining building baseload

INTENT OF STUDY:

- Electrification of chiller plant - Replace existing steam turbine chillers with electric driven water to water heat pump units to provide core cooling and perimeter heating simultaneously.
- Electrification of heating systems - Replace Con Ed steam service with rooftop air sourced heat pumps in concert with water-to-water heat pump units to provide heating hot water to perimeter induction units and heating coils in outside air handling units. This concept is only possible if the electric utility energy source is derived primarily from renewable resources and the grid infrastructure can support the additional electric load.
- Electrification of domestic hot water - Install heat pump domestic hot water heaters capable of recovering heat from the core tenant loads and providing domestic hot water for bathrooms and pantries.



Organics Waste Collection at HELENA 57 WEST



Thermal energy storage plant at One Bryant Park

- Smart building platform - Study the implementation of Fault Detection and Diagnostic (“FDD”) platform that can identify pending failures, unintended overrides, stuck dampers, faulty temperature readings and efficiency improvements.
- BATC Upgrades - Improving upon the newly installed DDC BATC system, increase the number of zones by adding thermostats for more precise control and to allow for automated set-back based on occupancy sensors in private offices.
- Convert the existing domestic water house pump/tank system to individual pressure zones, reducing the electricity required for toilet flushing and hand washing.

INVENTORY OF EQUIPMENT TO BE EVALUATED:

- Chiller plants
- Air handlers
- Space Heating (ConEd Steam, etc...)
- Domestic hot water production
- Façade improvements



One World Trade Center BMS Control Screens

COMMITTED BUILDINGS

733 Third Avenue

733 Third Avenue is a 24-story, 445,000-square-foot commercial office building with street-level retail. Standing on the southeast corner of Third Avenue and 46th Street, 733 Third Avenue features 7,107 SF of green roofs and exclusive outdoor terraces for tenants to enjoy. 733 Third Avenue's LEED GOLD certification in 2018 under LEED v4 Existing Buildings: Operations + Maintenance reflects the successful implementation of Durst's portfolio-wide sustainable policies and procedures. Constructed in 1961, the building features an early generation curtain wall, heated with ConEd District steam, and both steam and electrically driven vapor compression chillers that provide cooling throughout the building. Air is delivered to the spaces by a mix of recently replaced perimeter induction units and a constant volume reheat system.



COMMITTED BUILDINGS

655 Third Avenue

655 Third Avenue is a 30-story, 425,000-square-foot commercial office building with street-level retail. Conveniently located one block from Grand Central Terminal, 655 Third Avenue features a renovated lobby, double glazed windows that deflect glare and reduce heat gain, and 4,775 square feet of green roofs. The building recently achieved Gold certification under LEED v4 Existing Buildings: Operations + Maintenance. It was constructed in 1958 featuring an early generation curtain wall, which recently underwent a window replacement. It is heated with ConEd district steam. Cooling is provided throughout the building via two steam driven vapor compression chillers. Air is delivered to the spaces by a mix of perimeter induction units and a constant volume reheat system.



COMMITTED BUILDINGS

One Bryant Park

Setting a new standard in sustainable commercial construction, the Bank of America Tower at One Bryant Park was the first skyscraper in North America to achieve LEED Platinum certification and ranks among the most environmentally advanced skyscrapers in the world. One Bryant Park is a 51-story, 2.35 million-SF commercial office building with street-level retail. It was constructed in 2008 and conceived with the vision of creating the highest quality modern workplace emphasizing daylight, fresh air, and an intrinsic connection to the outdoors. In this sustainable icon, cooling is provided throughout the building by two electrically driven centrifugal chiller plants. Air is delivered to the spaces by a mix of underfloor air distribution and overhead fan powered boxes. A 4.6-Megawatt natural gas turbine generator supplies power to the ConEdison electrical distribution network.



VALUE OF PARTNERSHIP WITH NYSERDA

Joseph and Rose Durst founded The Durst Organization on the philosophy to “Leave each place better than you found it.” This belief has driven the Durst family to develop innovative and sustainable offices, retail, and residences for four generations. The Empire Building Challenge aligns with this founding principle and The Durst Organization’s long-term commitment to own buildings in perpetuity, resulting in the continual reinvestment in our existing assets. Our partnership with NYSERDA and participation in the EBC reflects our sustainable ethos and will reduce building energy use and lower our building’s carbon footprint.

