

## PROJECT PROFILE

Market: Commercial  
Type: Office  
Location: New York, NY



## ENERGY MONITORING AND CONTROL FOR DEMAND MANAGEMENT

### PROJECT SCOPE & SPECS

<b>Developer / Owner:</b>	Newmark Knight Frank
<b>Building Size:</b>	17 Stories; 225,000 Sq. Ft.
<b>Incentive Programs:</b>	Con Edison Demand Management Program
<b>Primary Energy Conservation Measures:</b>	Central Monitoring & Control Platform for Air Handling Units and Cooling Towers



In 2015, Sentient Buildings was challenged with reducing the energy usage without compromising tenant comfort at two large commercial buildings: 1560 Broadway and 515 Madison Avenue. These buildings have air handling units (AHUs) and one cooling tower per building. A peak load reduction strategy was investigated as both commercial buildings have their highest occupancy from 1-6 PM, during peak hours, when electricity rates are most expensive.

Sentient designed a solution to provide building operators with a central monitoring and control platform for the AHUs and cooling towers. The new system delivers real-time monitoring and control of each AHU with an on/off rotational system to bring some AHUs offline during peak periods, while still maintaining comfort. It also gave operators the ability to modulate the speed of the cooling tower fans with a variable frequency drive to control tenant space temperatures for occupied and unoccupied times.

Sentient isolated the loads on the AHUs and cooling towers to better understand their usage before and after the system improvements. As a result of the new controls, the AHUs and cooling towers now use 16% less energy. These improvements allowed the buildings to be enrolled in Con Edison's Demand Management Program, with sustained savings of approximately 100 kW in demand reductions. Con Edison granted the buildings an incentive of \$79,000, which covered about 50% of the project cost.