Energy Case Study
TISHMAN SPEYER

Tishman Speyer acquired Le Delta in 2011. At which point, Tishman Speyer’s in-house property management team embarked on a simple yet effective strategy, demonstrating that a combination of informed operational changes can have a big cumulative impact on a building’s total energy consumption. The improvement process had three key focuses: limiting waste; optimizing existing plant, equipment, and operations; and constant performance improvement while minimizing the need for significant capital expenditures. It was estimated that approximately 30 percent of the reductions were achieved through rebalancing the building’s mechanical and system configurations.

Specific initiatives targeted at reducing electricity, heating, and water consumption were developed in the following ways:

- Operating hours were optimized in coordination with the heating and cooling needs of the occupants throughout the year.
- A high-efficiency, variable-speed motor was installed on the main air-handling unit. This increased the efficiency and flexibility of the HVAC systems, making it possible to adjust the ventilation rates to align with the building’s occupancy.
- Plant and equipment that was incorrectly installed, set up, or redundant was repaired or removed as appropriate.
- Lighting loads were reduced by replacing more than 800 light fixtures with LED lamps, decreasing the brightness of lighting in the car parks at night and over the weekends, and fitting the large interior atrium with an automatic dimming controller linked to natural light levels.
- Surveillance of the water fixtures was increased to track and eliminate leaks; infrared mixing valves (sensors) with an output of 3 liters/minute were installed on taps.
- Signage was used to build tenant awareness and buy-in.

Cost
Most efficiencies were achieved through operational changes and thus required no investment. The average return on investment of the minor capital expenditures, such as the heat-recovery wheel, was two years.

Consumption Reductions and Savings from 2011 to 2013 (Base Case 2010)

<table>
<thead>
<tr>
<th>3.8 million kWh</th>
<th>10%</th>
<th>781</th>
<th>€694,000</th>
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<tbody>
<tr>
<td>TOTAL ENERGY REDUCTION</td>
<td>WATER REDUCTION</td>
<td>EMISSIONS (MTCO₂e)</td>
<td>TOTAL SAVINGS</td>
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<td>56% reduction in energy consumption</td>
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Benefits
In addition to the financial and environmental benefits, Le Delta is now one of only four buildings in France to have received the full 14 “Tres Performant” ratings (“Excellent”) out of 14 in the HQE Exploitation certification process (Haute Qualité Environnementale label, similar to LEED EBOM).

Challenges
Making a significant impact requires a combination of experience, commitment, and appropriate technology. Establishing partnerships with all those working in the building is critical to achieving the building’s full potential.