



CASE STUDY



Energy Measurement Program for LEED Certified Building

BACKGROUND

To measure and continuously improve environmental performance of operations in North America, the company established an aggressive goal to reduce energy consumption across all major office buildings by 40% over the next ten years.

CHALLENGES

To achieve the long-term environmental performance goals, the organization needed to identify the current level of energy performance and establish interim goals for improvement across North American offices totaling more than nine million square feet. Critical success factors included real-time measurement and public visualization of performance to involve building occupant participation in environmentally sustainable behaviors.

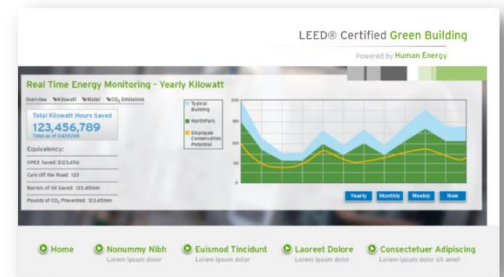
SOLUTION

Darby Consulting developed an energy consumption model establishing a baseline of current power, water and electricity performance and facilitated workshops with HVAC, lighting and energy experts to identify and prioritize benefits that could be achieved from investments in sustainable technologies.

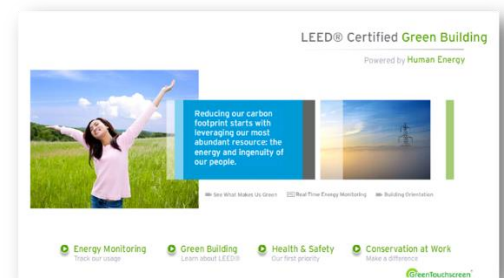
Based on the workshops, it was evident that technology alone would not be sufficient to achieve a 40% reduction without the participation of building occupants to conserve energy usage. Darby Consulting designed and piloted the company's first Green Touchscreen to provide real-time dashboards of energy consumption and education videos on how occupants' behavior in the workplace could reduce consumption.

RESULTS

A Green Touchscreen was installed in the lobby of the company's corporate office for the Gulf of Mexico business unit. Real-time energy performance data from building automation systems demonstrated baseline and trending information for power and water consumption. The behaviors of employees achieved greater than expected results as the organization began to visualize their energy consumption. Employee culture changes were evident as behaviors such as taking the steps, using turn-style doors, turning off lights and shutting down computer monitors at night produced meaningful savings for the company.



Real-time energy monitoring data of kilowatt, water and CO² emissions providing baseline, actual and trending information in real-time, weekly, monthly and yearly intervals.



Educational touchscreen providing information, videos and policies related to green building behaviors of building occupants.