

Fenwick & West LLP:

A State-of-the-Art, Energy-Efficient Data Center

PROJECT

Intelligent lighting for industry-leading, energy-efficient data center

LOCATION

Mountain View, CA

APPLICATION

Data Center Renovation

DATE

December 2010



Fenwick & West LLP is a national law firm specializing in technology and life sciences. Founded in 1972 on the principle that technological developments would shape the future of the business world, it recently sought to incorporate the next generation of energy-efficient technology into its own facilities by implementing LED lighting in its primary data center for west coast operations, located in Mountain View, California.

Seeking to further maximize energy savings, Fenwick & West selected Redwood Systems' intelligent lighting technology. The firm achieved centralized control of the data center's lighting, with easy web-based access, improved light quality and increased visibility into the facility's energy usage. The system also complements the data center's energy-sensitive mechanical systems, which include cold aisle containment and controlled air flow management, helping the facility dramatically improve power usage effectiveness (PUE) and attain Leadership in Energy and Environmental Design (LEED) certification.

With its lighting and other renovations, Fenwick & West's facility models the power-saving potential of data centers of all dimensions; indeed, it is one of the United States' most efficient centers of its size and applied for LEED Platinum status in early 2011.

Summary of Benefits

- **Dramatic efficiency gains** due to significantly reduced lighting energy through “on demand” lighting.
- **Detailed, easily accessible data** that provides insight and informs decisions on not only lighting, but also on building usage and operation.
- **A customized lighting environment** that improves productivity with judicious workplace lighting, occupancy sensing and real-time monitoring of unauthorized areas.
- **Lighting controls** that contribute to LEED credits in energy efficiency, indoor environmental quality, and innovation in design categories of LEED.



Lighting On Demand

Fenwick & West wanted to ensure it realized all of the benefits of its LED installation. Redwood’s platform provides the firm with “smart” lighting capabilities: the capacity to use light only when and to the degree people need. Sensors attached to the LED fixtures detect people’s presence in the data center and respond by lighting only the pathways in use, and with Redwood’s fine-grained dimming control, lights can be turned up and ramped down in smooth, linear fashion without ever disturbing staff working in the space.

Improved Insight Into Data Center Functionality

Redwood’s customized control system gathers data on each individual light fixture. Fenwick & West relies on this information to enhance aisle configuration and overall space utilization. Additionally, the per-fixture lighting data increases monitoring capabilities and tightens data center security.

“We selected the Redwood platform for our data center because it offered a highly advanced and cost-effective way to control our lighting environment, and provided rich insight into the building’s performance. The network’s innovative features, including sensor-based lighting and advanced data generation, give us the tools we need as we fulfill our commitment to aggressively driving down our energy use across our buildings nationwide.”

— Julie O’Loughlin,
Senior Director of Operations/Facilities,
Fenwick & West

Unprecedented Energy Savings

Since installing Redwood’s technology, Fenwick & West has improved its data center’s lighting efficiency by approximately 90 percent. The LED fixtures run at considerably cooler temperatures than the data center’s previous lights, helping contribute to dramatically reduced HVAC operations in the facility. Combined with the facility’s other energy-efficient technologies, Redwood’s network has helped Fenwick & West significantly decrease the energy consumption of the data center, contributing to a 1.2 PUE overall.