



Supermarket Chain

A Case Study: Reducing Costs While Enhancing the Shopping Experience



A leading California-based supermarket chain recently embraced the opportunity to further enhance the shopping experience it offered its customers. A successful and well-known chain of over 300 supermarkets located throughout several west coast states, the franchise had achieved a reputation as a high-quality supermarket, a dedicated community partner, and an environmentally-conscious organization since being founded nearly a century ago. In addition to its premium-quality food products, the chain prided itself on the broad range of in-store services it had come to offer — from full-service pharmacies, floral departments, banks, and photo centers to scratch bakeries, fax/copy centers, and dry cleaners. In keeping with the chain's expanding array of products and services as well as the evolving needs of the sophisticated target market it attracted, it was determined that the chain's 10-year old lighting configuration would greatly benefit from an upgrade. While the previous system of ceiling-mounted switching fluorescent 3-lamp cross sections in tandem 16-foot arrangements was very much in keeping with the efficient, cost-conscious decor that dominated many retail establishments in the mid-1990's, the light that it threw out had grown excessively bright by current standards and was no longer consistent with the high-quality image and atmosphere that the store wanted to convey. Agreed the chain's director of construction, "the store's lighting was inadvertently drawing the customer's attention upwards to the light source itself instead of to the store's merchandise." In addition, the system's unsophisticated dimming capabilities resulted in a less-than-pleasing array of lights-out throughout the store when fixture switching was engaged by store management or mandated by

the local utility company during power shortages. The construction of a brand new 55,000 square-foot store in California offered the chain's management the opportunity to test an exciting new lighting system that could address multiple objectives. "We realized that an upgrade of our store lighting could offer us dual benefits, helping to place our quality products and services in the forefront to create an even more pleasurable shopping experience, while at the same time enabling us to continue providing the premium products that our customers have come to expect at the most competitive prices," confirmed the chain's head electrical engineer. "In the highly competitive supermarket environment, we sought to be the best in our class." Over the ensuing months, the store's team researched and ultimately installed an innovative new system involving 32W fluorescent T8 lamps driven by some 700 Philips Advance 2-lamp Mark 10[®] Powerline electronic dimming ballasts, housed within a Wellmade fixture and further incorporating HUNT Dimming controls. The ballasts' easy-to-use dimming features offered store management the ability to dim all of the lamps when they needed to instead of relying on their previous system of shutting every third lamp off, which had a noticeable and unpleasant effect throughout the store. Additionally, incorporation of a lighting controls element, which interfaced with the store's Building Management System (BMS), enabled the store to capitalize on load shedding strategies for additional operating cost reductions as well as to more accurately control light levels to the store's specifications. Overall, the new lighting system provided the chain, one of the largest private users of electricity in California, with greater control over its

energy use and practices. Proactive demand-side management activities such as the installation of this new lighting system will further help the store's facilities support state-wide energy conservation measures as well as potentially avoid the disruptive power outages and/or costly penalties periodically imposed by California utilities in the wake of the state's recent and well-publicized power shortages.

The system has met with great success in the new store. Says the chain's electrical engineer, "based on the ballasts' 1.0 ballast factor, the new system has offered such solid light output that it enabled us to reduce our lamp and ballast count by one-third, which has significantly reduced our product and maintenance costs. In addition, the system has reduced our installed electrical load by 10%." The further use of louvers and baffles on the lamps has helped to soften the store's lighting and keep it unobtrusive, allowing the store's merchandise to take center stage. "And, most importantly," confirms the Engineer, "customers have noticed and commented on the improved lighting in the store and sales have increased." With such positive results, the chain hopes to extend an equivalent new lighting system to as many as 200 of its stores. "Lighting is a significant factor in the décor and image of our stores as well as an important element behind the overall shopping experience," concludes the Engineer. "Our new lighting system is now much more consistent with the image we want to convey, but at the same time has successfully reduced our energy consumption, initial cost, and total cost of ownership while significantly improving lighting quality."

Project Overview

Project Site:

A leading West Coast-based supermarket chain with 300+ stores

Project Scope:

Upgrade of lighting system at new store in California

Project Timetable:

Lighting upgrade occurred in 2003

Products and Suppliers:

The upgraded system involved Wellmade fixtures housing 32W T8 fluorescent lamps driven by 700 2-lamp Philips Advance Mark 10® *Powerline* electronic dimming ballasts from the system also incorporated lighting controls by HUNT Dimming

Energy and Cost Savings:

The new system's 1.0 ballast factor enabled an immediate reduction in lamp and ballast counts by one-third and the new system reduced the store's installed electrical load by more than 10%

Other Benefits of Upgrade

- Significant improvement in lighting quality
- Maintenance cost reductions
- Reduced stocking requirements
- Supports California's demand-side energy initiatives and helps the chain avoid exposure to utility-imposed power outages and/or penalties

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