



To save 90% on lighting don't switch off. Switch to LEDs.

Marlborough company Provincial Coldstores saved nearly 95% of energy used for lighting, by making the switch to LEDs. The company is now saving \$30,000 a year on its energy bill, and using the equivalent of just 40 50-watt halogen bulbs to light its entire storage facility.

Provincial Coldstores is a 25-year-old business based at Blenheim and Spring Creek. It provides 60,000 cubic metres of frozen, chilled, warm and ambient storage facilities, with a temperature range of -25° to +30°c.

The proudly local business provides storage at all temperatures for Marlborough's many export producers, from wine to mussels to cherries. General Manager Donald Horton hired Digital Lighting Solutions (DLS), an Auckland company which designs and manufactures LED lighting for domestic and export markets, to design and install the new system.

Dave Reid of DLS explains that while lighting for a storage business

may sound straightforward, the requirements were surprisingly complex because of the variety of products stored.

"Each room had a different layout and use, which presented many technical challenges. For example, in the large storage areas we installed fork truck emitters, which turn the lights on only where they are working. As soon as you've left the lights can go off or dim – conventional motion sensors stay on for longer."

"We installed motion sensors for walkers in low-use areas, so the lights weren't on all day in places where people hardly ever go."

"LEDs are particularly useful in cool stores - they produce less heat than conventional lights, so your chillers don't have to offset so much energy from the lights."

DLS also used daylight harvesting – lighting control systems that are able to dim or switch electric lighting in response to changing daylight.

Provincial Coldstores General Manager Donald Horton is extremely pleased with the result of their lighting upgrade.

"We've had Dave down for analysis and we're up to 90% in savings, and so much better lighting – everything is sharper and clearer. The motion sensors ensure the lights are off 80% of the time so it's great."

LED lighting uses much less electricity to provide the same light levels as conventional lights. It can be designed to deliver savings and safety enhancements for most businesses.

Technical advantages

- LED lights have a service life of over 60,000 hours, reducing relamping costs, landfill and carbon footprint.
- Lifespan is unaffected by frequent switching.
- Because the lights are only on when needed, and will often be dimmed, service life is extended even further.
- LEDs emits much less heat – meaning the refrigeration can be used for cooling product and not rejecting heat from light fittings.
- LED lights contain no toxic materials.