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Hospital Cures Wasteful Energy Spending

The Queen's Medical Center (QMC), located in downtown Honolulu, HI, is the largest private hospital in the state and has more than 3000 employees and over 1200 physicians on staff. With so many people coming in and out, it is no wonder that the facility's energy bills were so high.



Electric bills averaging \$375,000 a month in 2004 had been increasing three to five percent every year. "Our base kilowatt consumption wasn't increasing substantially," says Michael Kim Seu, manager of general maintenance for the 146-year-old hospital, "but our energy costs were just climbing. Still, we knew our administrative council would want solid proof that spending big money on new lighting technologies would provide a fast payback."

About 90 percent of the hospital's lighting retrofits, excluding the seven-story Miller Street Garage, involved the removal of over 22,300 linear fluorescent lamps and over 15,000 standard electronic ballasts and the installation of more efficient linear fluorescent lamps and UltraMax ballasts from GE Consumer & Industrial.

In the Miller Street Garage, a total of seven floors were outfitted with 93 54-W T5 linear fluorescent lamps (two per fixture). These replaced 173 150-W standard metal halide lamps (one per fixture). According to the hospital, lowering the watts per fixture and number of fixtures on each level of the garage amounts to a 30 percent reduction in electrical consumption. Two other garages are slated for similar retrofits.

The initiative also involved newly installed reflectors for enhanced light output and energy-saving occupancy

sensors, components of the comprehensive new lighting system recommended by Darren Kimura of Energy Industries, an energy services company.

Overall, the retrofit has netted QMC over \$25,000 worth of rebates from Hawaiian Electric Company. After the forecasted 18-month payback period for the full project—11 buildings plus the garage—the hospital expects to realize savings of \$250,000 every year (based on a rate of \$0.14 per kWh).

Photos: Courtesy of the Queen's Medical Center

