Kwantlen UNIVERSITY COLLEGE

Sustainability Success Story

Kwantlen 'Count the Incandescent' Program Yields Surprise

The Challenge

At Kwantlen we have long appreciated the advantages of using compact fluorescent lighting instead of incandescent lights, and by early 2002 had changed out all incandescent lamps in our external fixtures. Yet we had never reviewed the 'miscellaneous' incandescent lamps we knew were still in many desk lamps, hall ceiling fixtures, mechanical rooms, etc.

Our Solution

By mid 2004 we undertook an audit to find how many remaining incandescents we had in total on our campuses. The big surprise came when we realized we had over 450 incandescents in various locations, at an average 70 watts per lamp.

The audit included a short questionnaire given randomly in about 20% of locations where an individual had direct control over the lighting. We learned that if there was opposition to compact fluorescent lamps most was caused by the lamps being too bright. We began specifying replacements that were one size less than the typical recommendations. The result? Happier staff and even lower operating costs.

Considering the extended life of the Compact Fluorescent, the lamp premium (project cost) was very little (ie. 6 incandescents cost about the same as 1 Compact Fluorescent) and we could consider this a no-cost ECM (Energy Conservation Measure).

Project Cost, Annual Savings and Other Benefits

Costs	Minor start-up or premium cost versus current practice
Savings - Dollars	$4,000 per year (Electrical operating costs only)
Savings - Electrical	80,000 kWh (about 1% of our total consumption)
Reduced Maintenance Costs	The compact fluorescent lasts much longer than incandescents with a corresponding significant decrease in maintenance (bulb changing) costs.
Simple Payback (years) / Return on Investment (ROI)	3 – 4 months (800 hours) / Return on Investment of 35%
Environmental Improvement - Greenhouse Gas Reduction	30 Tonnes
Environmental Improvement – Other	Reduced transportation consumption & landfill footprint
Reduced Environmental Mercury	A kWh of coal-fired electricity puts substantial mercury in the atmosphere. More efficient products reduce mercury contamination at source.
Other Benefits	Demonstrates Leadership, Commitment, the Sustainability Process, improved Risk Management benefits.