



## SUSTAINABILITY SPECIAL

### RETRO-FIT LEDS

#### CAN I?

Often the answer is yes! LEDs are highly efficient and the preferred solution to many Companies energy consumption problems. We have trialled numerous different versions and have found them to be very efficient in certain applications. Physically they fit in to existing fittings without too many problems (fitting and LED type dependant) while the wiring requires minimal alterations to suit. When specifying upgrades to incorporate LEDs make sure you specifically ask for redundant components to be removed otherwise you will have a fitting full of unnecessary switch gear.

#### WILL IT WORK?

This is where the skill comes in! LEDs are not consistent in their performance or output from different manufacturers. A 5.4W LED from one manufacturer may well provide less lumen output than a 4.9W LED from another. Beam angles on LEDs are notoriously tight, without clear documentation, specification and installation instructions, fittings with replacement LEDs installed can provide comparatively little lumen output. Great for energy consumption, but bad for eyesight and Health & Safety at Work regulations!

#### WHAT IS NOW AVAILABLE?

##### GU 10 lamps:

LED's to act as direct replacement for 230volt GU 10 lamps. Try 5.3 watt 5000k cool white 420 lumens output. Or 3000k warm white 338 lumens.

##### Replacement CFL's

Side entry downlighters replace 18 watt to 26 watt direct with LED's 8 watt to 13 watt.

##### Fluorescent lamps 600mm

Normal LED output is approx one third of top of the range T8/T5. LED tubes do not benefit from LG3 Cat 2 mirrors as all their light is downward, wide angle LED's on there way and hence light output will improve...watch this space.

#### Next Issue:

- BS7671:2008 17th Edition – Amendment 1 – How does it affect your business?
- Ventilation – are you complying with building regulations?
- Voltage optimisation—is it for me?



**BS7671:2008 -  
Amendment 1 now out**  
**ARE YOU UP-TO-DATE?**  
**Call us now for more  
information**

### Low Energy Lighting

Everyone wants low energy lighting, but how do you achieve it? A balance has to be struck between light output and energy efficiency in order to meet the relevant lighting guidelines and Health & Safety requirements. k-lec have specialised in designing schemes where light output is calculated and then achieved through energy efficient solutions, be they low energy compact fluorescents or LED's. k-lec also advocate twin switching and daylight saving

### Smart Metering

A lot of people offer smart metering, but how do you get something that goes beyond telling you your total consumption over a set time period? By working with an innovation specialist k-lec have provided a number of clients with real time on-line smart metering that can provide a circuit by circuit breakdown of energy consumption. With a little planning and assistance these circuits have been split to enable the client to measure exactly what they want, whether that is lighting loads, small power or specific machinery equipment. As its in real time via the

where practical to maintain uniform lighting levels and optimal energy efficiency. A word of warning – many specify the fitting with the least energy consumption, however light output is not always directly proportional to energy consumption, and lamp life varies considerably. Others specify presence detection for optimal energy saving however this can reduce lamp life by 80%!



web.. ever thought...wonder if the cleaners turned off all the lights, how come my boilers fired at 2am and off at 3am..

### PROJECTS UPDATE

- Electrical changeover of new transformer and associated LV panels completed over one weekend at state-of-the-art manufacturing facility in Huntingdon
- Successful DNO negotiation with Western Power Distribution leads to two new projects getting the go-ahead with Worcester College of Technology
- Smart metering installed in Lend Lease offices at Worcester Royal Infirmary
- Cable thefts in factories assessed and remedial works specified for Loss Adjusters – saving them £000's
- Three supported Housing Upgrades completed for Rooftop Housing Group greatly increasing light levels and energy efficiency.