

Light fantastic

Reducing energy, environmental impact and cost, while also complying with legislation... Specifying lighting is no longer simple. Steed Webzell focuses on what matters

With government and regulators calling for industry to consider environmental issues, to drive down energy consumption and to rein-in waste, selecting commercial lighting has become more than just a simple 'cost versus illumination' equation.

For instance, the WEEE (Waste Electrical and Electronic Equipment) Directive, which came into force on 1 July, now places obligations on users and producers to handle electrical waste in a prescribed manner. In some instances, the price of compliance is now being passed on to customers in the form of a WEEE levy – so your choice of lighting technology and supplier might have additional cost implications.

Thorlux Lighting, for example, believes that expecting customers to pay for disposal at the time luminaires are purchased, is neither fair nor practical. So it's invoking Regulation 9 – the alternative arrangement. That allows two choices: you can dispose of waste lighting via your chosen contractor, maybe recovering some cost as materials become more valuable; or you can contact Thorlux to arrange for collection.

Long-life lighting pays off

One way to minimise the impact of WEEE is to acquire long-life, maintenance-free lighting. Irn-Bru producer AG Barr, for example, selected Endurance fittings from Chalmor at its Mansfield soft drinks bottling facility and achieved 65% running cost savings. Electrical consumption has been reduced by some 236,000kWh that, at a tariff of 4p/kWh, constitutes savings of nearly £9,500 per annum – providing a return on investment of under two years.

To date, 88 have been supplied and, since each provides 100,000 hours of life, the company is looking at more than 10 years' service before re-lamping – saving a further £5,000 per annum on maintenance. What's more, there will be no lamps to send for recycling under WEEE for at least 10 years.

While all that makes sense, it's still important to get good lighting. As Graeme Hall, managing



director of Waldmann Lighting, says: "It might cost you more to provide the right lighting, but it quickly proves its value. The direct results of effective workplace lighting include reduced absenteeism, greater efficiency, improved concentration levels, fewer rejects and higher productivity."

One of his company's latest LED lamps (SPOT LED 003) has a service life in excess of 50,000 hours – equivalent to six years of continuous operation – yet compares favourably with a halogen lamp that would need to be changed 25 times.

And here's another point: a spin-off benefit of sourcing energy-efficient lighting is that it can attract funding assistance. Take Parkersell, which installed energy-efficient lighting into Blue Diamond Engineering in County Durham. The project qualified for an Action Energy Loan from The Carbon Trust, which offers SMEs in England and Wales a 0% interest loan repayable over a negotiable period.

All facilities management systems can cut

Technical pointers

- A-Plant has produced a two-page summary of the Health and Safety Executive's 'Lighting at Work' booklet, giving clear guidelines as to the requirements of contractors when assessing an area for lighting
- Since few users are thrilled about the prospect of additional costs, as a result of the WEEE Directive's requirements, some providers are re-thinking their commercial lighting offerings
- Lighting maintenance and installation at Dow Corning's site in Barry are being provided by Parkersell – with payback from switching off unnecessary lighting during daylight hours (using time-out controls in low occupancy areas), and using long-life lamps to keep maintenance costs down



building management costs, with centralised single or multi-site control. Another provider is Citect, with its PC-based CitectFacilities. This system can reduce operating and maintenance costs, while also cutting energy consumption, tracking after-hours use and generating custom reports for individual billing of all building tenants.

Meanwhile, if you're specifying lighting for difficult and/or hazardous environments, there are other considerations – primarily, performance in wet, dusty or corrosive conditions. Crompton Lighting's Tufflite range of linear fluorescent luminaires, available from Cooper Lighting and Security, is a good example. There are two models, both featuring a deep poured gasket seal for IP65 protection. Tufflite TFW is the general-purpose, luminaire, with a flame-retardant polycarbonate body, prismatic diffuser and clips. Tufflite TFC, with its glass-reinforced polyester body and stippled acrylic diffuser, is for corrosive chemical sites.

Finally, for outdoor applications requiring temporary lighting, you might want to consider renting the new GenSet VT1 Superlight towers from GenSet, now available nationally from A-Plant. The VT1's 9m mast can be erected automatically in less than 30 seconds and carries 4,000W of metal halide lighting, covering a lit area of 4,500m².

Elsewhere, Wilkinson Star has launched StarLight SL55, a new lighting tower package that uses an integrated MOSA generator and 5.5m telescopic steel mast with 4 x 400W metal halide floodlights that can illuminate a 1,700m² area. This unit can run for 17.5 hours. **ES**



Shedding light on the Euro Energy Directive

According to Neil Jones, managing director at lighting specialist Ex-Or, there is still confusion and debate over the Energy Performance of Buildings Directive, the European edict designed to increase investment in energy efficiency.

"The timescale of implementation, methods of energy use calculation, type of certification required, how the rules will be enforced... None of these factors seem to be set in stone yet, at least in the UK," he says.

However, construction and refurbishment of buildings won't wait for the legislators: architects, designers and plant specifiers need to ensure they are incorporating energy-efficient equipment and systems able to meet obligations for current projects.

Additionally, far too often lighting is the last thing to be considered when identifying both energy waste and opportunities for saving energy – even though lighting accounts for up to 25% of emissions from commercial buildings.

In the UK, implementation of the new directive will be via Part L of the Building Regulations covering conservation of fuel and power. Part L states that lighting controls 'should be provided so as to avoid unnecessary lighting during the times when daylight levels are adequate, or when spaces are unoccupied'. The hope

is that compliance with the directive could put commercial buildings on target to meeting a quarter of their energy-saving obligations before big ticket energy items like heating and air conditioning are even considered.



"Obviously, specification of the latest low-energy luminaires, such as LG3-compliant T5, is vital," says Ex-Or's Jones, "but the most energy efficient of them all is the one that is switched off when it is not needed."