From Halogen to LED – Reducing the UK's Carbon Footprint

How Local Authorities moving to LED technology are saving revenue costs and reducing CO2

Background

For the past three decades, the known effects of carbon dioxide (CO2) on our environment have become increasingly more prevalent, most notably for its effect on global warming. For Local Authorities/ Councils, who are under constant scrutiny to be 'getting things right' whether environmentally or financially, reducing their carbon footprint and ultimate spend is essential business practice.

Recently Buckinghamshire County Council, alongside Dynniq, upgraded all 160 of their traffic signal sites from the traditional tungsten halogen lighting to LED. Having demonstrated significant results, with a typical 2-pole crossing showing an 82% reduction in C02 for the signal heads and an 86% cost saving on their energy bill for the running of said signal heads, this created a benchmark in which others then followed suite.

Solution

With LED technology now in its 5th generation and evidentially more efficient and effective than its predecessors, increasingly more and more Local Authorities are seeking to benefit from these savings.

Looking to go green and to reduce their energy bills, both Derbyshire County Council and Peterborough City Council awarded Dynniq the contract to upgrade a number of their sites. For Derbyshire, this meant supplying and installing 110 heads and 600 aspects across 25 sites, whilst maintaining lamp and red lamp monitoring. The Peek Elite TLED solution was installed, offering the best energy savings on the market at the time running at 9 watts. A similar solution was supplied and installed for Peterborough County Council, with 100 heads and 700 aspects across 40 sites.

Having secured internal Salix funding, an interest free loan available to the public sector under the proviso that they improve energy efficiency and reduce carbon emissions, Lincolnshire County Council instructed Dynniq to retrofit 2500 aspects into existing Peek Elite signal head bodies across all of their 90 sites. Analysis carried out post installation proved that the theoretical calculated savings were accurate and have subsequently been recognised by each of the Clients.

Using Dynniq LED technology, Dynniq are confident that they source only the best products; evidence of which is shown in the Elexon codes.

"We really do have THE best LED signal head products on the market" – Darren Mancey, Business Manager Urban South, Dynniq UK and Ireland.

Typical Single Crossing with No Lamp Emulation

	KG/CO2 per kW/h	CO2	
	Qty	Halogen	LED
RAG Head	4	867.60	161.17
Ped Head	2	405.20	73.89
PB Unit	2	28.60	5.42
Total		1,301.40	240.48
% Savings			**82%**

Outcome

Ultimately, Clients are looking to cut their energy bills and reduce their maintenance costs, whilst addressing the government targets of lowering their carbon footprint through CO2 emissions. In comparison to halogen, LED has a greater longevity and reduces energy consumption and costs, with an average payback of between 5-7 years.

What does this mean in monetary terms? A typical 2 pole crossing using halogen costs on average £341 a year; the same crossing using LED would cost on average £48.25 per annum, highlighting significant financial savings.

"We estimate that the new LED traffic light solution will be six times more energy efficient with a reduction in carbon emissions by 300 tonnes, delivering an energy saving of about £60,000 each year."

Tim Clark
Traffic Signals Manager,
Lincolnshire County Council

Dynniq UK
Hazelwood House, Lime Tree Way,
Basingstoke, Hampshire
RG24 8WZ
United Kingdom

T +44 (0)1256 891 858
E marketing@dynniq.co.uk

dynniq energising mobility

dynniq.co.uk