

Leeds Invention Lightens The Gloom For Local Councils



Local authorities across the UK are achieving 40% cuts in street lighting energy costs thanks to the ingenuity of a Leeds electronics company.

The Leafnut system is the result of a six-year research and development programme at Harvard Engineering and also cuts carbon production and toxic waste by upto 50 % across the whole street lighting infrastructure. Producing savings of 100kg of carbon emissions per lighting column per year, it is easy to install and commission in new or existing lighting schemes.

Judges awarding the product the prestigious Lighting Design Award for light sources and control gear said: "This will revolutionise the street lighting industry."

The system provides monitoring, switching and dimming control of each street light, revolutionising maintenance programmes by providing individual lamp fault reports. Streetlights are controlled via a webserver and are programmed to vary their light level to correspond with traffic and population density. In this way lights can be dimmed during the night when they don't need to be run at full power or turned up during special events such as football matches or closing times.

Accurate inventory information is also provided to the street lighting managers who can plan maintenance schedules as they can identify failed lamps and even predict when lamps will fail by using the monitoring data that the system provides.

Harvard financial director Martin Baum believes the innovative company's latest product has a tremendous future: "Basically, it provides a two-way conversation with each street light, logging whether it's on or off, how long it's been running and useful life remaining. Each light can be controlled at varying power levels and there's also an emergency button. Clearly there are also additional financial and carbon footprint savings in not having to despatch staff in transport to check lights.

"One town in Holland uses the system to increase public lighting on Friday and Saturday and Warrington in Cheshire is 100% committed to LeafNut. Westminster Council is about to complete a 12-month trial and three sites in Sheffield are currently on trial. Before going public, we tested the system exhaustively on our own business park in Leeds – where it is still operational."

Cllr Andrew Carter, Leeds City Council's executive member for development said: "Harvard Engineering epitomises the mix of enterprise and innovation so characteristic of Leeds manufacturing companies. The combination of growth, investment in research and development and the launch of a market-leading new product range points to a bright future for the company and its workforce."

At forefront of technology

Leafnut is the latest product to flow from £9m turnover Harvard's Beeston headquarters where the emphasis is on research and development. Some 20 highly qualified electronics engineers are based in the firm's laboratory, creating and refining products for the workforce of over a hundred.

The firm has come a long way since Bradford-born electronics engineer John McDonnell, frustrated by his lack of progress with British companies, developed an electronic ballast product in the kitchen of his Kingston-on-Thames home. Joined by his brother Michael, he returned to Yorkshire in 1993 to launch Harvard in Stanningley. The brothers remain at the helm as managing and commercial director respectively.

Harvard is now one of Europe's major designers and manufacturers of electronic ballasts and control gear, supplying leading lighting manufacturers in the UK, Europe, USA and Far East, with export sales accounting for 10% of turnover.

Competing with big names including Phillips, Osram, Thorn Group and Matsushita, the Leeds company has cleverly exploited niche markets and used different techniques in commercial lighting, where the trend is increasingly towards more compact products with improved energy efficiency.

It has achieved many "firsts" in the lighting industry, including one of the worlds first compact high intensity discharge ballasts for retail displays for firms including Marks and Spencer and New Look. And while competing with major manufacturers, Harvard also collaborates on product development with, General Electric, Sylvania and companies as far afield as Finland, India and USA.

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