

Floods of Improvements At United Utilities

LED lighting supplied by One Electrical is part of a programme of energy saving measures being introduced by United Utilities, including boiler replacements, improvements to building fabric and more efficient air-conditioning systems



United Utilities

Building and operating an extensive and complex asset base that comprises of more than 575 wastewater treatments works (WwTW) means United Utilities consumes a significant amount of energy. It's a problem that the UK's largest listed water company is determined to address and, thanks to an LED lighting solution from One Electrical, 13 of its wastewater treatment plants across the North West have reduced energy consumption by more than 60%.

As part of the Carbon Reduction Commitment Energy Efficiency Scheme (CRC), United Utilities are seeking sustainable energy solutions and intends to convert its entire asset base to reduce its £5m annual exposure. To date, its energy efficiency improvement activities have delivered more than 10GWh in power savings worth almost 5,500tCO₂e.

The LED lighting supplied by One Electrical is part of a programme of measures being introduced by United Utilities, including boiler replacements, improvements to building fabric and more efficient air-conditioning systems.

Project Introduction

Established in 2000, One Electrical is a manufacturer and distributor of own-branded lighting and wiring accessories, specialising in LED lighting.

Driving growth by pioneering the use of LED technology when the commercial take up of LED lighting was in its infancy, One Electrical positioned itself as a leader and innovator in that marketplace. The move is paying dividends, with One Electrical established as an experienced, high quality supplier of LED lighting products.

One Electrical has pioneered the use of LED lighting in commercial installations, delivering quality, innovative solutions to the marketplace that enable end users to reduce their carbon footprint and drive down energy costs. This made the LED lighting specialist an ideal supplier for the United Utilities framework contract and One Electrical was asked to review and improve lighting at 13 of its wastewater treatment plants.

United Utilities benefited from not only from the expertise of One Electrical, but also their understanding of sustainable energy techniques and how best to utilise efficiencies.

This resulted in simple cost reductions and the re-investment of savings to improve service delivery.

Greener Energy

Inefficient lighting accounts for 40% of a business' total energy consumption. Installing LED lighting has significantly reduced United Utilities' electricity bill and carbon footprint.

At each wastewater treatment plant, lighting was inefficient, unattractive and required regular maintenance. Since converting to LED, lighting costs have reduced by more than 60%.

To minimise disruption to operations and ensure lighting could be converted without requiring a wider refurbishment to accommodate different fittings, One Electrical provided like-for-like LED floodlights, streetlights and retro fit tubes, which were installed over a two-month period from February 2014 to April 2014.



“I’ve been very impressed with the way that One Electrical has helped us to secure this business. From the initial help with demonstrating the product to the client, offering us competitive prices to win the order and then managing a tight order schedule smoothly despite changes along the way. Overall they’ve shown us that they are a trusted supplier in the LED Lighting market and as result, we are now stocking and selling a wide range of One Electrical LED products and will continue to work with them on future projects.”

Danny Fegan, branch manager of Edmunson Electrical Ltd

Internally, more than 4,000 One Electrical T8 LED Tubes ranging from 4ft/18W to 6ft/28W were installed throughout the 13 sites. The T8 are a direct replacement for standard fluorescent tubes and reduce energy consumption by more than 50%, while providing superior light quality. The 4ft/18W version offers 1,800 lumens and a 6ft/28W version offers 2,500 lumens.



The T8 LED Tubes also provide constant brightness which replicate natural daylight. This is hugely beneficial to shift workers and helps boost motivation and productivity.

Externally, more than 770 One Electrical ASA Anti Corrosive LED Floodlights were installed, ranging from 30W to 200W. The ASA series are perfectly suited for adverse weather conditions, being water, weather, UV, impact and chemical resistant, as well as flame retardant.

This series of LED floodlights feature a highly anti corrosive construction, from a combination of ASA plastic and pure 6063 aluminium, making it the ultimate choice for energy efficiency.

These IP65 rated fittings are also designed to reduce maintenance and improve end user safety.

Installed to help illuminate particularly dark areas of the exterior building and parking area for enhanced safety benefits, the 30W version provides 2,700 lumens and a 200W version offers 18,000 lumens.

In addition to the floodlights, the exterior lighting installation included around 125 One Electrical's 30W LED Streetlights, both with and without integral photocell. The IP65 units are the ideal alternative to metal halide and high pressure sodium streetlights and boast instant start and flicker free properties. Their energy efficiency and long lifespan make LED Streetlights the ideal solution for reducing carbon emissions.

The entire project took place over a two-month period between February and April 2014.

Bilfinger Industrial Automation Services Ltd was the appointed contractor and carried out the installation across each of the 13 sites.

Edmunson Electrical Ltd in St Helens was the wholesaler in which One Electrical supplied the products to.

Commenting on the project, Danny Fegan, branch manager of Edmunson Electrical Ltd said: “I’ve been very impressed with the way that One Electrical has helped us to secure this business. From the initial help with demonstrating the product to the client, offering us competitive prices to win the order and then managing a tight order schedule smoothly despite changes along the way. Overall they’ve shown us that they are a trusted supplier in the LED Lighting market and as result, we are now stocking and selling a wide range of One Electrical LED products and will continue to work with them on future projects.”



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Financial Benefits

Each of the 5,000 LED products supplied by One Electrical offers a life expectancy of 50,000 hours, compared to just 8,000 hours with traditional fluorescent lighting. With an average working week of 84 hours, the new lighting is expected to last more than 10 years, which will dramatically reduce United Utilities maintenance hours and lamp replacement costs.

The United Utilities project has reduced energy consumption by more than 60% at each of its wastewater treatment plants and decreased the cost of energy proportionately. By switching to LED, United Utilities also benefits from reduced operational costs indefinitely.

The complete LED installation is estimated to generate savings between £75,000 - £100,000 per annum, which with a life expectancy of more than a decade, will result in a £1million saving.



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About One Electrical

A UK based distributor of own branded quality electrical wiring accessories and lighting products, specialising in an extensive range of innovative, energy efficient LED lighting products. We are a recognised supplier to all UK national electrical wholesale groups and have hundreds of independent lighting & electrical wholesale customers, with more than 1,500 active UK accounts.

A Carbon Trust Accredited Supplier, One Electrical Ltd offers an LED lighting solution for every application; carrying extensive stocks of over 300 unique LED product lines with wattages ranging from 2W up to 200W, all with high lumen efficiency performance.

The product range includes retrofit products and also complete LED luminaires for both commercial and domestic applications. They are also able to supply bespoke LED products designed to exacting requirements; and offer a Relux based lighting design service. All of the LED products have a long life expectancy of 50,000 hours and are supplied with a minimum 2 year warranty.



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