Balfour Beatty enrols iVolt to reduce energy use in London

BALFOUR Beatty is using iVolt's ground breaking technology as part of measures to halve its carbon emissions by 2020.

The infrastructure giant, which counts facility and energy management among its services, turned to iVolt's award-winning voltage optimisation system to slash energy consumption at a Government building in central London.

With around 1,161,027 kWhrs of electricity being consumed at the site each year, it was facing energy bills of nearly £105,000. But by using iVolt's advanced technology to monitor and reduce the incoming voltage from around 241V to a steady 220V - the level at which electrical equipment is designed to work best – energy consumption has been reduced to the tune of nearly £11,000 a year.

The average 10.3% reduction, which translates into Co2e savings of some 62.7 metric tonnes, means the iVolt unit will have paid for itself in just 2.4 years.

The voltage optimisation technology – which prompted the *The Daily Telegraph* and HSBC to name iVolt one of 30 British businesses "with world class potential" in 2012 - was chosen over other systems on the market not only because its variable reduction system offers up to 30% more savings than fixed reduction units, but because it offers an integrated Intelligent Real Time (IRT) Energy Monitor. This patented device, which is unlike any other in the industry, is capable of accurately tracking the savings being achieved in real time, ensuring the Balfour Beatty team can easily monitor electricity consumption and predict costs. There is even the option to have the data transmitted via a GPRS communications module, for use in remote building energy management.

Jon Strelitz, senior supply chain manager for Balfour Beatty WorkPlace, explained it is a useful tool in tracking how the global company is striving to lower its impact on the environment.

"At Balfour Beatty we have produced a Roadmap which sets out the ways in which we aim to tackle, among other things, climate change and energy demand in the coming years. Our aim is to reduce carbon emissions across the facilities in our estate and projects under our control by 50% by 2020, and the implementation of efficiency measures and alternative technologies such as voltage optimisation is one way we're striving to hit this target," he explained.

"The savings we are seeing as a result of installing the iVolt are higher than we initially expected and having the ability to track the site's energy use with the IRT system has significantly improved the way we are able to manage this site."

Although based on ground-breaking technology, the iVolt unit works on a simple theory – that electrical equipment works most efficiently when the power supplied to it is at a steady 220V.

> **iVolt's IRT technology has significantly improved the way we manage the site.**
>
> **Jon Strelitz, senior supply chain manager**
>
> **Balfour Beatty** WorkPlace

In the UK, the average power supply to a property is 242V, although it can vary from site to site and at different points of the day. The iVolt therefore monitors and reduces the incoming voltage to a site, reducing energy consumption and bills, and eradicating the peaks and troughs in supply that can cause damage to equipment and lead to on going maintenance costs. This not only prompts savings because of a reduction in the amount of electricity consumed, but by improving the lifespan of bulbs, motors and pumps and reducing the need for servicing.

Designed for premises the size of a small retail unit upwards, the iVolt has been installed at sites ranging from airports and rail stations, supermarket, hotel and restaurant chains, schools, colleges, factories and within the NHS.

PROJECT/CUSTOMER: Balfour Beatty Workplace	**IVOLT UNIT SIZE** 500Amps, 3ph (330kVA)
YEAR OF INSTALL: 2012	**ENERGY SAVING** 10.3%
ANNUAL kWhr CONSUMPTION 1,161,027	**CO2 EMISSIONS REDUCTION** 62.7 metric tonnes

The iVolt® was designed in the UK and production takes place at its facility near Heathrow Airport. The company is part of the global Sollatek group and is accredited to ISO9001:2008

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