

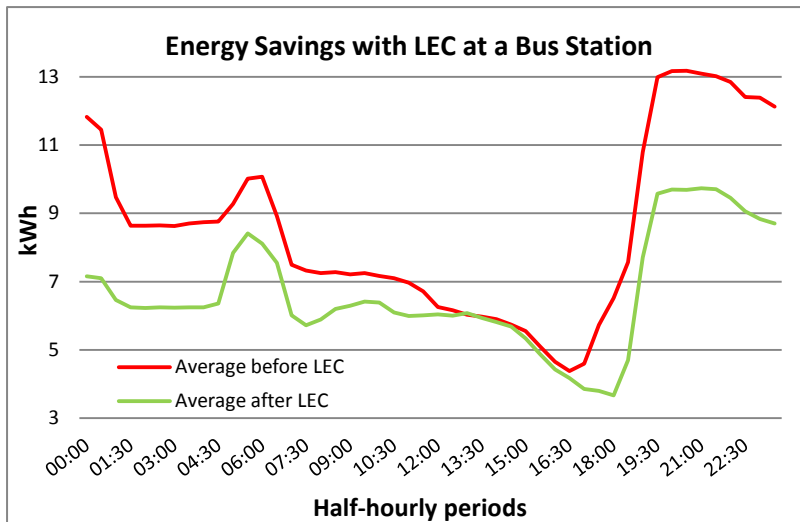
case study



TRANSPORT FOR GREATER MANCHESTER

Transport for Greater Manchester reviewed the energy efficiency of some of their largest bus stations to identify opportunities to save money and carbon. Voltage optimisation of the lighting systems was identified as the best opportunity for significant savings as over 70% of their energy use was from lighting. Following a competitive procurement process, Apollo Enviro were appointed to install PowerSines LEC units at three TfGM bus stations.





THE CUSTOMER

Transport for Greater Manchester is the delivery arm for the Transport for Greater Manchester Committee, which is responsible for investing in improving transport services and facilities, supporting the largest regional economy outside London.

TfGM's vision is "To improve the quality and availability of transport networks and services, supporting the economic prosperity of Greater Manchester by connecting people with employment, education, health and leisure choices in ways that are affordable, accessible and environmentally sustainable."

Click here to find out more: www.tfgm.com

THE CHALLENGE

TfGM have approved a Climate Change Strategy which sets a target to reduce their carbon emissions by 13.5% by 2015. One of the biggest impacts on their carbon footprint is the energy use from bus stations, so improving buildings' energy efficiency was identified as a priority action. With energy costs rising and a carbon tax shortly being introduced TfGM recognised that in order to provide

value for money, energy use and carbon emissions must be tackled through invest to save measures.

After discussions with Apollo Enviro, voltage optimisation was identified as the most cost effective way to address rising electricity bills. As a public body, TfGM have to follow strict procurement criteria to ensure the right quality and best value whilst ensuring compliance with all necessary regulations. Apollo Enviro beat competing providers with the class leading PowerSines Lighting Energy Controller (LEC), which Apollo Enviro distributes nationally.

THE SOLUTION

Bus stations are ideal candidates for voltage optimisation technology; the lighting is often quite old and inefficient, meaning significant savings can be achieved. The low initial cost of installing voltage optimisation also results in a return on investment in less than 2 years.

Furthermore, the exclusive astro-clock feature in PowerSines LEC units ensure lights are turned on and off with GPS accuracy. This site specific switching at exact local sunset and sunrise times typically generates an

additional saving of 5-10% versus the inaccuracy of manual or other automatic switching methods.

Combining this additional saving with the estimated 23-28% savings gained by optimising the lighting supply voltage at Ashton, Wigan and Leigh bus stations makes the LEC the choice voltage optimisation unit for lighting systems with an external element.

THE BUSINESS BENEFIT

The savings generated by the 3 LEC installations at Ashton, Wigan and Leigh bus stations are expected to save TfGM approximately:

- 93,180 kWh per annum
- £10,160 per annum
- 46 tCO₂e per annum

The payback periods (inclusive of the additional out-of-hours installation costs) at the three bus stations are impressive, currently predicted at:

- Ashton - 18 months
- Leigh - 18 months
- Wigan - 26 months

CUSTOMER TESTIMONY

"We are always looking at ways to reduce our energy consumption, lower our energy costs and reduce our environmental impact. In the current economic climate, public sector organisations need to find ways to achieve more with less funding. Voltage optimisation was shown to be one of the most cost effective ways to achieve significant energy reductions at our bus station sites with a low level of capital investment."

"After the initial free site surveys to establish the potential for savings, Apollo Enviro arranged the installations out of hours to minimise disruption to our passengers. We are very happy with the results of the installation."

Katherine Hudson
Head of Environment, TfGM

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