



**TRANSPENNINE
EXPRESS**

Key Facts:

- BEMS drives distinct downward trend in energy usage across 13 stations
- Lowest energy consumption observed in five years' monitoring in many sites (excluding those that have had recent lifts installations)
- Better temperature control in all locations.

"the figures show the lowest energy consumption for five years over comparable periods for those stations that haven't had major infrastructure upgrades, such as new lifts."

Iain Peacock, Environment & Emergency Planning Manager



WIRELESS BEMS HELPS TRANSPENNINE EXPRESS CUT ENERGY USE AT RAIL STATIONS.

The installation by Aimteq of wireless BEMS (building energy management system) at numerous stations on the TransPennine Express rail network have helped eliminate excessive energy wastage in back of house areas, waiting rooms and ticket halls. Using a modular MX system from WEMS, Aimteq - a specialist in the installation, maintenance and optimisation of BEMS equipment - has been able to control air conditioning and lighting systems, as well as gas boilers and electric heating, to ensure energy is consumed only when necessary. Remote system monitoring and management is now being provided through Aimteq's bureau services.

Part of FirstGroup, TransPennine Express is an intercity train company that provides rail services to customers across the North and into Scotland. With a vision to Take the North Further, the company is delivering an investment of £500million in new services, brand new trains and more seats over the next two years.

Challenging application

"Like all rail operators, TransPennine Express has a responsibility to ensure the comfort of its customers and staff. However, spaces such as waiting rooms and ticket halls provide a particular challenge," states Iain Peacock, Environment & Emergency Planning Manager, TransPennine Express. "Many were designed and built many years ago with very basic provisions for heating and climate control. As a result, the company was witnessing excessive energy wastage."

In some waiting rooms the only form of heating controls was a manual on/off switch, which was open to public manipulation and meant rooms were being heated far longer than required. Without remote control the only way to rectify this was manually, while an additional control challenge was the distance between waiting rooms and ticket halls - sometimes as much as 200 metres.

Going wireless

Determined to increase on-station comfort levels and lower its energy consumption, Iain Peacock researched the market for a suitable solution, as he says "Aimteq and the WEMS modular MX system stood out for a number of reasons. Firstly, wireless technology would ensure radically quicker and simplified installation without damage to buildings or the need for cables to cross live railway lines. In turn, this would lead to far less disruption for customers and staff; sensors can be installed in a matter of minutes, with no cables to run, no ceilings to cross or holes to drill."

Another reason for selecting the Aimteq/WEMS solution was the bureau service, which meant the client could delegate the controls to an expert who would be able to remotely optimise energy consumption across all sites on an ongoing basis.

"TransPennine Express was attracted to our culture of flexibility and willingness to work closely with customers, helping identify requirements for temperature and lighting control," says Vipul Palan, Business Development Manager at Aimteq. "A quick turnaround was required from customer decision to installation, and we were able to respond rapidly."

This proved important as a large number of stations were identified for retrofit; those at Brough, Dewsbury, Grimsby, Huddersfield, Malton, Middlesbrough, Manchester Airport, Northallerton, Scunthorpe, Selby, Stalybridge, Thirsk and Thornaby.

WEMS

TransPennine Express use WEMS wireless BEMS to control their stations. If you need help with a wireless solution, call Aimteq on **0161 475 1777** or email info@aimteq.co.uk



▼ Huddersfield Train Station - one of the 19 managed by TransPennine Express

Gaining control

The WEMS modular MX system is highly customisable, ensuring it is able to scale up in line with customer growth. For TransPennine Express, the system currently controls air-conditioning and lighting systems, but also (in some stations) gas boilers and electric heaters. Temperature controls and sensors enable remote management through set points for each area. Furthermore, the system can match climate control to occupancy, so energy is only consumed when necessary.

Platform lighting at the majority of the stations was included to manage the control of light levels and times, through distribution boards located on each platform. This is also contributing to overall energy savings.

The installations were completed between December 2016 and February 2017, since when, remote monitoring and management has been provided through Aimteq's bureau services. TPE carries out both internal and external reporting every four weeks - 13 times a year.

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Iain Peacock, Environment & Emergency Planning Manager



"Looking at the first set of figures, from December 2016 to March 2017, there is a distinct downward trend in energy usage across all sites. Indeed, the figures show the lowest energy consumption for five years over comparable periods for those stations that haven't had major infrastructure upgrades, such as new lifts," confirms Iain Peacock. "From a comfort perspective, far better temperature control has been provided at each station. Aimteq also helped educate TransPennine Express staff about why central control is necessary for simplified operation, maintenance and, importantly, saving energy and costs."