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cost savings



HOW TO SLASH YOUR DEPOT COSTS

Stagecoach has **cut gas consumption by 20%** at bus depots. So can you



Mel Holley
/ Editor

4 Stagecoach depots have been upgraded with energy management technology.

Better still, there is a return on investment within two years, making a business case easy to put together.

And, it's all managed remotely by an expert, rather than relying on local staff.

The installation of BEMS (building energy management systems) by UK-based specialist Aimteq, has seen Stagecoach make aggregate gas savings across 24 upgraded depots of 20.45% based on regression, and 17.15% based on year-on-year consumption data.

Cutting carbon

In 2015, Stagecoach launched a sustainability strategy that included a plan to cut carbon emissions at its transport operations in the UK and North America.

Produced in partnership with the Carbon Trust, the 'Shared Responsibility, Shared Future' strategy includes aims such as reducing the carbon emissions from

buildings by 7% by April 2019.

Cutting carbon is not only good for emissions - and also your business as corporate customers are increasingly looking to coach and bus operators to have a strategy - it also makes financial sense.

Within Stagecoach UK Bus, its target demands a total capital expenditure of around £1.3m - relatively modest considering the number of sites involved - and is focused on lighting, heating, ventilation and air conditioning, as well as behaviour change and monitoring.

Out with basic

However, it is expected to deliver cumulative cost savings of £4.7m by the time of its completion.

"BEMS is one of several initiatives that we are implementing to help meet our carbon reduction target in buildings," says Graham Whitelocks, Director Safety, Health & Environment at Stagecoach UK Bus.

"Previously, our depots relied on basic heating controls and we felt there were significant gains to be made by switching to wireless BEMS."

The wireless aspect of the solution is deemed particularly important



LEFT:

Stagecoach already runs some buses on 100% bio-fuel. Cutting energy consumption in buildings makes good green and financial sense

ABOVE:

Worksop depot was used as the pilot, to see what savings could be made

considering a typical bus depot.

"Our bus depots generally comprise large structures and in some cases the sites have more than one building, so going wireless is very cost effective as there is no need to pull cables across buildings," explains Graham.

"Wireless is quick and easy to install without causing any disruption to our staff or operations. In addition, a wireless system is much easier to amend as depot requirements change."

Fully wireless

WEMS - a fully wireless energy management system - and Aimteq, a leading systems integrator experienced in WEMS technology installations, proved to be the perfect fit.

As WEMS sensors are wireless and discrete, they can be installed during regular working hours. This means no overnight labour and no costly shut-downs. Sensors can be installed in minutes, with no cables to run, no ceilings to cross or holes to drill.

"Another reason we opted for the Aimteq/WEMS solution was the bureau service, which meant we could delegate the controls to an expert who could remotely optimise energy consumption across all sites on an

ongoing basis," says Graham.

"Leveraging a bureau service would remove the need for an in-house BEMS expert at every depot."

System piloted

Stagecoach initially ran a pilot at its Barking (East London) and Worksop (Nottinghamshire) depots during the 2014/15 heating season.

With the immediate success of these installations, a further 22 depots have since been upgraded across the country.

To date, WEMS has been installed in London (seven depots), East Midlands (eight depots), Manchester (six depots) and Liverpool (three depots).

"There has been no disruption to daily operations, allowing our staff to continue with their work during BEMS installation," says Graham.

Under control

Each system controls the depot's gas heaters and boilers, maintaining the temperature in the workshop area at an agreed set point of 16°C. In fact, heating is matched to the occupancy at each depot for both normal working days and weekends. Another feature sees the heating system connected to the workshop doors, allowing the heating to be turned off when the doors are open.

Importantly, the bureau can remotely change any parameters, such as timing schedule or temperature set point, at the request of Stagecoach.

"We have a partnership-based relationship with Stagecoach," says Vipul Palan, Business Development Manager at Aimteq.

"We go far beyond what is expected of a 'regular' system integrator, working together closely on a strategic level to ensure carbon reduction targets can be met.

"The bureau service offers a 'centralised control' concept that allows us to implement a consistent heating strategy across all depots, in liaison with Stagecoach.

"This ensures ideal environmental conditions for staff while reducing the risk of heating being left on during non-operating hours.

"Where requested, we have installed 'view only' access to WEMS, allowing depot managers to monitor gas consumption and temperature profiles within the workshop."