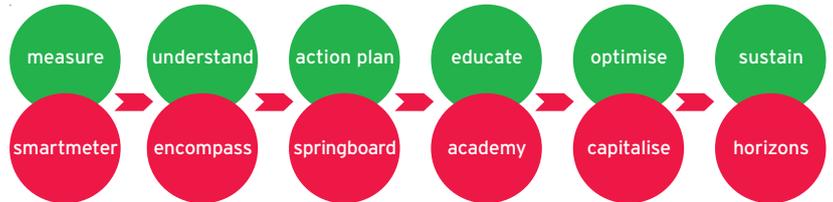


Project

Ts Ferrybridge Workshops



TS Ferrybridge is an **npower** site comprised of heavy machine workshops with associated offices. During normal working hours there are about 150 to 300 people on site. In 2008 TS Ferrybridge used nearly **3GWh** of electricity at a cost (including the climate change levy) of circa **£350k**. With the rise in the cost of electricity in recent years, a team was set up to find out if any savings could be made. This case study explains how TS Ferrybridge have used npower's **m³** services - **Encompass, Academy** and **Capitalise** to reduce their electricity use by **23%** in June 2009 compared to June 2008.

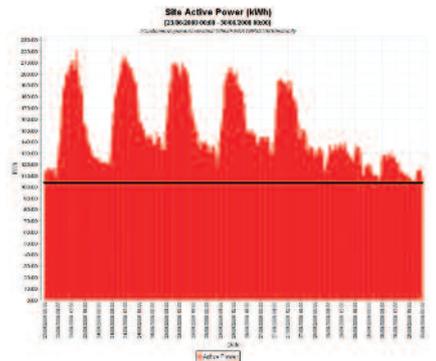
Measure

Half hourly meters helped provide data to track TS Ferrybridge's consumption and this allowed data to be analysed by **Encompass**.

Monitor

Encompass is a web-based monitoring and targeting system. The **Encompass** tool provides a visual display of how energy is being consumed across the week and was invaluable in assessing where **energy savings** could be made at TS Ferrybridge. Encompass showed around 60% of the electricity use was in the **base load**. This is shown by the solid line in the graph below. This pattern is typical when appliances are left running all of the time, even when no one is working.

Encompass helped the project team identify where energy was being used and more importantly where it was being **wasted**. By turning equipment off at specific times, they were able to see which areas were consuming the most energy. As the energy saving measures were implemented they found that they could see the results of these changes in the graphs produced by **Encompass**.



m³ : Measure; Monitor; Minimise.

At npower we recognise that energy management is a journey. We have designed our products to help businesses with each stage of this journey – from initial measurement of the energy, to understanding how it is being used, right through to looking at options for sustainable energy generation. The diagram at the top of this page highlights the npower products and services available at each stage of the energy management journey.

Visit: npower.com/enlightenedenergy

Minimise

npower has conducted **energy audits** as part of the **Capitalise** service on all its major sites. Using the recommendations from the audits, TS Ferrybridge have implemented the following changes:

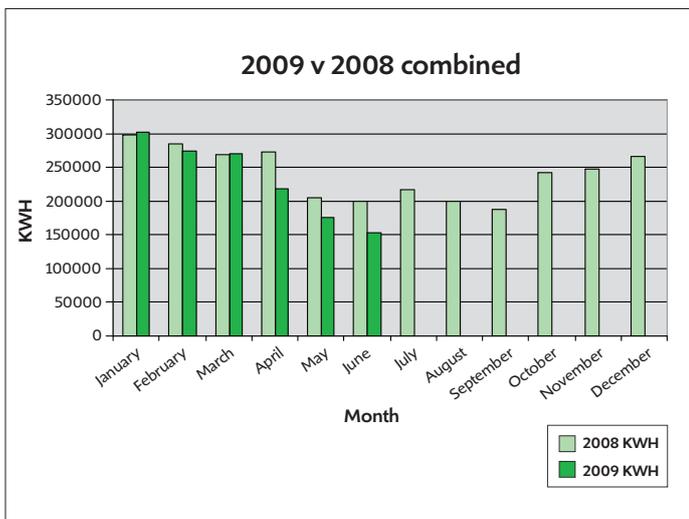
- Replaced 108No. 400W SON lights used in the workshops with modern **efficient** equivalents which use half the energy.
- Installed a **Building Management System (BMS)** to optimise heating and lighting requirements – this included splitting down larger areas onto **separate control switches** with timers so only the areas which required heat or light were turned on.
- Fitted **occupancy sensors** to automatically turn lights on and off in offices and corridors as required.
- Installed 9No. 6m x 3m windows in the large workshop area to make use of **natural light**. This minimised the need for electric lights during the day and also created a more pleasant working environment.

TS Ferrybridge developed **Energy Champions**, part of the **npower Academy** education toolkit to tackle the problem of equipment being left on unnecessarily. Eight champions were trained across the site and it is thought that around a fifth of the savings made are due to their efforts to challenge their colleagues to **"switch off"**. The knowledge gained by the energy champions also allowed them to come up with ideas for other energy saving measures.

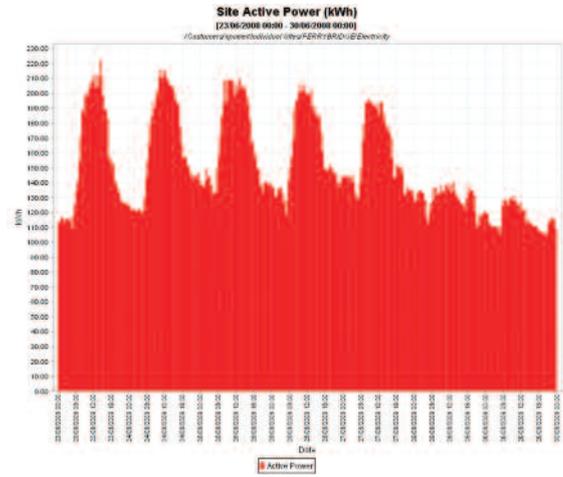
The results

The project work and the efforts of the energy champions have shown proven results. Initially the audits predicted a reduction in energy consumption of around **14%** but the results have far exceeded expectations. June 2009 was a record low with a saving of **23%** on June 2008. The chart below shows month on month reductions.

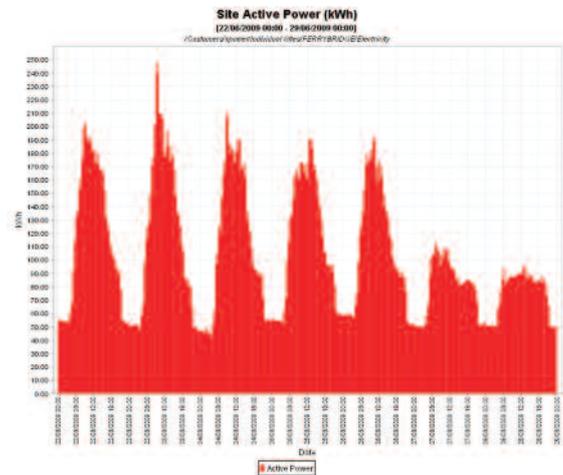
The capital cost for the implementation of these projects was **£130k** including the cost of m³. The resultant savings in energy costs will pay this back in approximately **2 years**.



The graphs below show the changes in the **baseload**.



THEN



NOW

Going further

TS Ferrybridge believe they can do even more and take savings to over **25%** in 2009 compared to 2008. They have moved onto gas saving and are implementing a new switching system for their large gas heaters so they can be turned on and off individually for an hour at a time. They will also be fitted with **temperature sensors** to turn off when ambient temperature reaches over 20°C.

"The Energy reduction project at TS Ferrybridge has achieved a steady 23% month on month reduction in our Electricity costs, which is excellent for the business as a whole, in not only costs but our carbon footprint; it has eased our ISO14001-2000 compliance significantly and we have just received the "Carbon Trust Standard", which is something we are very proud of".

Paul Griggs, GT Engineer, TS Ferrybridge

A brighter future for businesses

Our TS Ferrybridge case study shows what **m³** has done for npower. Our business energy services could help you do the same by helping you understand where energy is being used through **Encompass**, training your staff as part of our **Academy** service and by suggesting cost effective measures to save energy through **Capitalise** and when you are ready for sustainable options then supporting you through **Horizons**. For more information and an informal chat to see where npower can help you, please contact your BDM or account manager.