



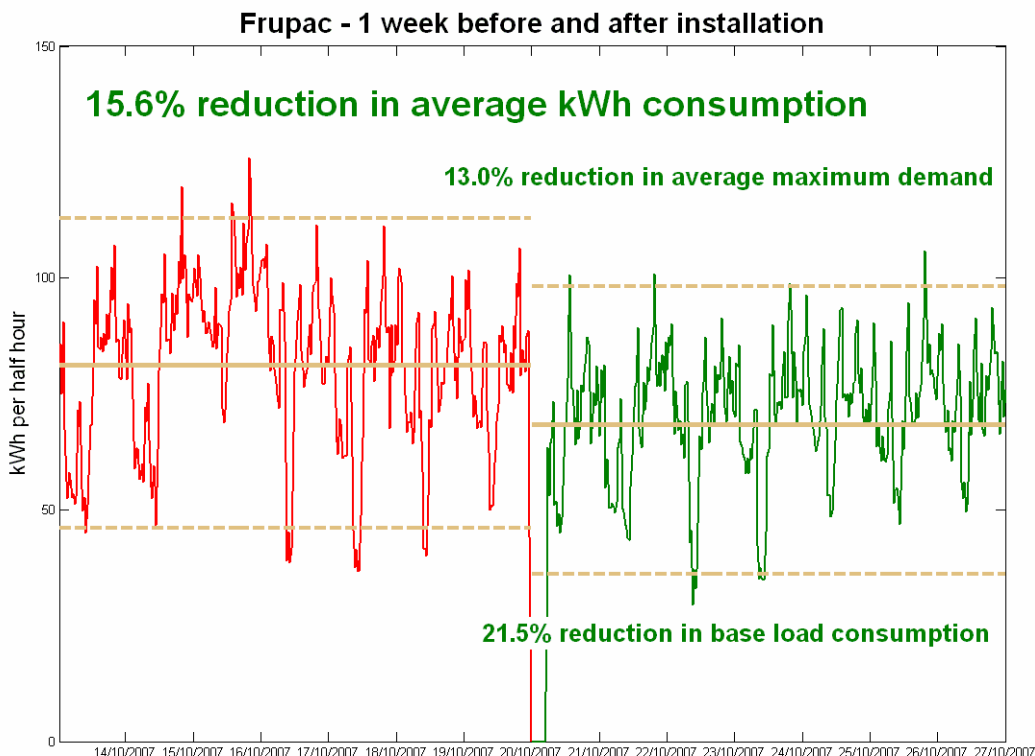
British and Brazilian, Peterborough

Analysis of electricity consumption data following *powerPerfactor* installation

Report December 2007

A 420kVA *powerPerfactor* Voltage Power Optimiser with a 9% optimisation setting was installed at British and Brazilian (Formerly known as Frupac – part of Produce World), Peterborough, on 20th October 2007. The following is an analysis of the half-hourly electricity consumption data for the site. Optimising voltage by 9% ordinarily yields a 14.5% reduction in average electricity consumption. As shown in the charts below, in this case average consumption for the period since the *powerPerfactor* was installed has been reduced by **16%**.

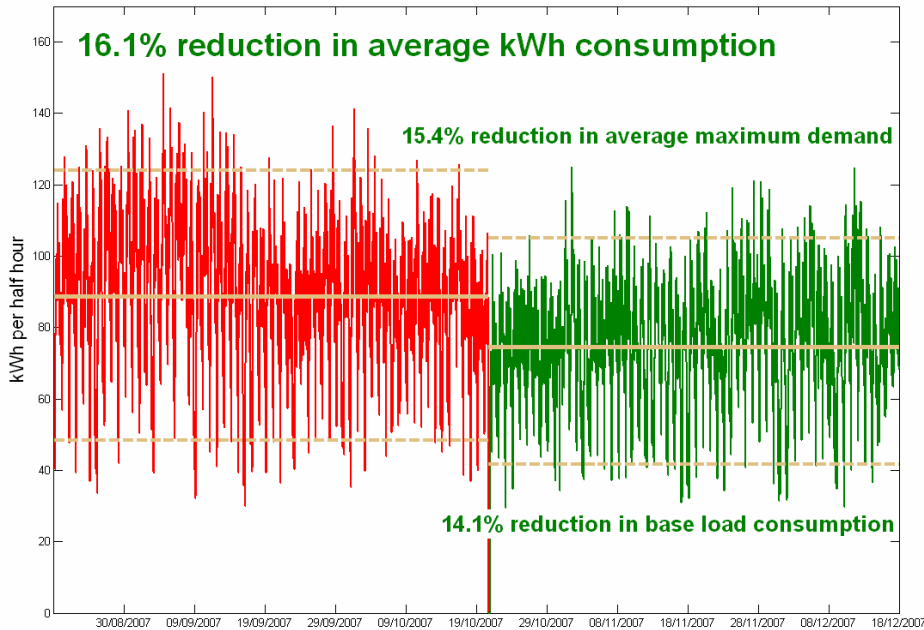
To assess the immediate effect of the *powerPerfactor*, we plot the chart below, showing the kWh consumption 1 week before and after installation. Average half-hourly consumption has been reduced from **81.1kWh** to **68.4kWh** – a saving of **15.6%**. There has been an immediate improvement in the electrical efficiency of the site, as electrical equipment is supplied with an optimised voltage.



These savings have been sustained throughout the period since installation, as shown in the chart overleaf. The 60 days since the *powerPerfactor* was installed have seen a reduction in kWh consumption of **16.1%**. Average daily maximum demand has been reduced by **15.4%**, from **248.2kW** to **210.0kW**.

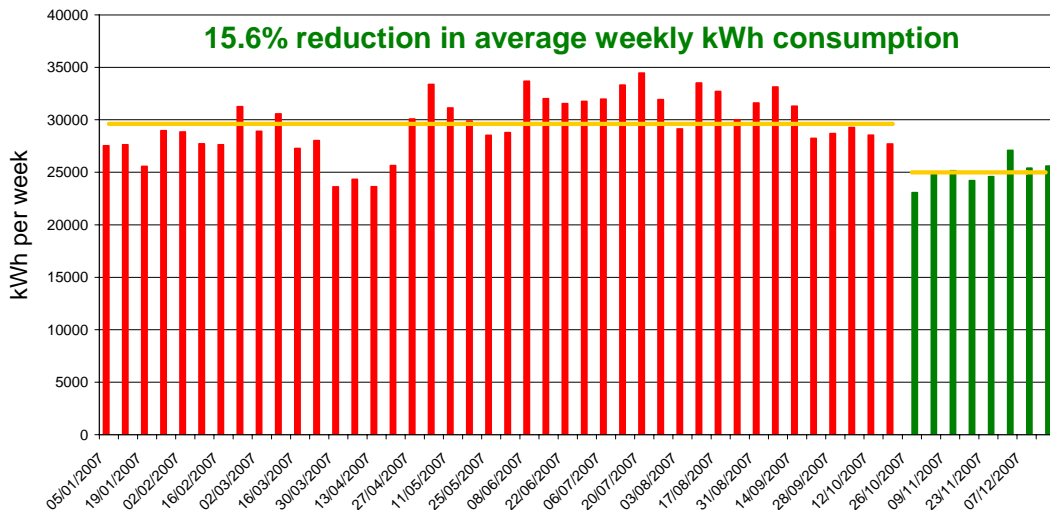


Frupac - 60 days before and after installation



It is also important to consider recent consumption levels in the context of longer-term trends in energy use at the site. The chart below shows weekly kWh consumption since January 2007. The reduction since the **powerPerfactor** installation is visually evident. Average weekly consumption from 1st January – 20th October was **29,608kWh** – this has now been reduced by **15.6%** to **24,992kWh**.

Frupac - weekly consumption



In conclusion, analysis of the electricity consumption since the installation of the **powerPerfactor** indicates that savings, which have exceeded predictions, are being made relative to previous consumption levels. The **powerPerfactor** is ensuring that the site operates with a high level of efficiency, as well as benefiting from improved power quality and protection against transients of up to 25kV.