



## Buckinghamshire County Council's New County Offices (1965)



The New County Offices' 15 storey building in Aylesbury is the focus point of the Council's administration with 750 employees working on a daily basis alongside a sophisticated electronic infra-structure. It is fully air conditioned and prior to the powerPerfactor installation was already an energy efficient building with high frequency lighting and building control systems.

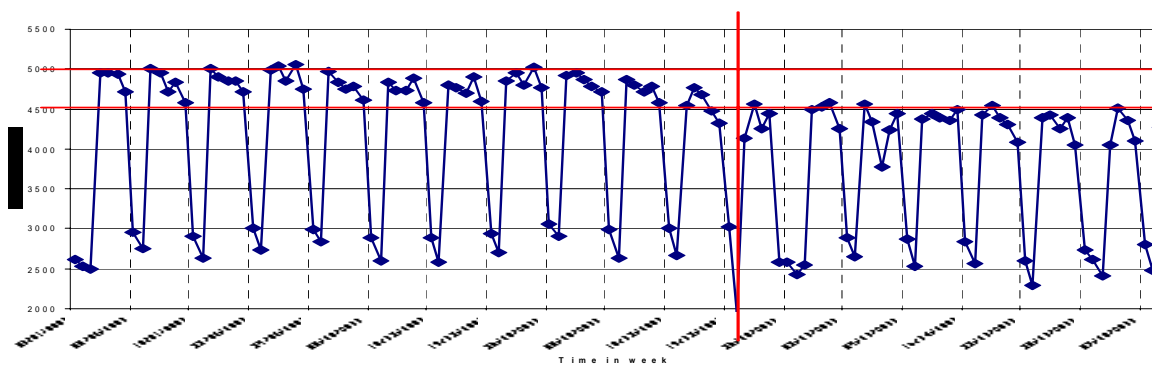
### Challenge

- ❑ To reduce the energy consumption and cost of electricity in the building by optimising the high voltage supply with the installation of a 560kva **powerPerfactor** unit. Having monitored the voltage level it was decided on a tap down of 8%. Minimum voltage prior to installation was 237v – now it is 218v.

### Method

- ❑ To compare the day to day consumption of the Offices in months prior to March 21<sup>st</sup> installation date and the months after by utilising the half hourly electricity data supplied .
- ❑ Some fundamental changes in infrastructure had occurred in the building since the installation.

The following graph shows a drop in kwh consumption and maximum demand after the installation.



### Results

- Overall Energy Consumption has been reduced by 13.1%
- The Maximum Demand has reduced by 10%
- The Power Factor has stabilised and improved significantly
- Harmful Peak Harmonic Distortion has been reduced by 12%
- Current in neutral has been reduced by 7%
- Phases are more evenly balanced
- Annual saving £12,000, 25 month payback, 48% ROI and 82tons of CO2 saving
- The Council is rolling out the technology in its other buildings.

The full report is available on request on 0845 6014723