

# Case Study #09

Voltage Power Optimisation



## Authorities combine to drive down energy costs

**Why it is interesting:** The case study outlines how collaborative working and a pro-active approach has led to greater cost and carbon savings across public bodies in Greater Manchester.

### The Association of Greater Manchester Authorities (AGMA)

#### Annual Savings\*

kWh:	5,652,390
CO <sub>2</sub> kg:	2,939,243
£:	502,240

\*Savings figures for 90 installations

Don't take our word for it...

*"All installations were carried out by powerPerfector's approved installers to the highest of standards and efficiency and with the minimum of disruption to the Council's day to day activities."*

Anne Mason  
Energy Manager  
Bolton MBC



**AGMA**  
ASSOCIATION OF  
GREATER MANCHESTER  
AUTHORITIES

#### Further information

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The implementation of cost saving green technology has reduced energy spend across Greater Manchester's public sector bodies by over £500,000 every year.

Using Official Journal of the European Union (OJEU) approved procurement and by

implementing cross organisational communication, AGMA has been able to adopt Voltage Power Optimisation across 90 sites.

By becoming early adopters of VPO® technology, many have been able to get ahead of the game in reducing their energy costs and carbon emissions.

#### Budgetary pressures

Recently, budgetary pressures on the public sector have added an extra challenge. How does the public sector meet environmental legislation whilst at the same time continuing to cut spending?

These challenges may seem to have contrary solutions, however there are technologies which can meet both requirements. VPO® is one such technology. It allows organisations to invest in carbon reduction while making significant savings on electricity bills. With average savings of 11 per cent, typical payback will be under four years.

What is clear is that all public organisations are facing the same challenges and it is more important than ever that when novel solutions and best practice are found that they are shared between organisations. AGMA has brought together the key environmental and technical decision makers from across the 10 local authorities and several associated organisations. The group works together towards strategic objectives and shares best practice between member authorities.

Local authorities, the police force and the fire service in Greater Manchester have installed VPO® in premises varying from civic centre offices, swimming pools, car parks and schools.



*"With the help of the **powerPerfector** personnel and their approved contractors, installations have gone smoothly and without disruption. Voltage Power Optimisation has been a core solution in our Carbon Management Programme and has been fundamental in achieving our annual consumption and CO<sub>2</sub> savings targets."*

Laura Partridge, Senior Energy Officer, Salford City Council

## Collaborative saving

Communication and collaboration within the group has meant that VPO®, once reviewed, was able to be rapidly adopted. Following more than 90 installations the group has saved over £1,000,000 to date, at an annual rate of over £500,000 a year. The group is stepping up to the environmental challenge as well, saving a combined 2,900 tonnes of CO<sub>2</sub> annually.

Additional benefits in terms of phase balancing, power factor improvement, transient protection and harmonic suppression mean that there are further cost reductions from protecting and elongating the lifespan of electrical equipment. Each site is benefitting from a reduced maintenance cost due to the lower voltage pressure and optimum power quality.

While these benefits are not easy to quantify, clients testify that VPO® leads to maintenance savings of up to 10 per cent – an added benefit over the 50 year lifecycle of the installation.

Adoption of VPO® has meant that the member authorities have a head start in tough financial times. Such collaborative working has helped to keep costs down and protect frontline services across Manchester.

### Wigan Metropolitan Borough Council

#### Annual Savings

kWh: **1,309,704**  
CO<sub>2</sub>,kg: **711,224**  
£: **127,497**

Since 2006, the council has been installing VPO® at suitable sites across their estate as part of a framework

tender. The tender specified voltage management with additional 3 phase voltage balancing, transient protection and improvement in power factor. After undergoing a lengthy evaluation **powerPerfector** was chosen. This tender led to many organisations within the north-west trialling our energy efficiency solution.

*"We are encouraging schools in the borough to utilise the framework, with 5 installations to date, and as such Wigan Council's 20 installations have delivered total savings of £360,000 since the start of the programme."*

Janet Ackary, Carbon & Energy Manager  
Energy Management Team

### Greater Manchester Police – GMP

#### Annual Savings

kWh: **979,620**  
CO<sub>2</sub>,kg: **532,900**  
£: **78,150**

The installation of 23 units into the police estate required extensive project management and engineering

expertise. The critical and secure nature of each site meant work was carefully organised and required that our installation partners met strict security protocols.

*"GMP were working to a tight schedule... **powerPerfector** provided a firm delivery date... This date remained accurate from its communication to the units delivery. Delivery of the main batch took place via a well organised multi-drop route to 17 different electrical switch rooms across Greater Manchester."*

Robert Hayes, Sustainability Manager  
Greater Manchester Police – GMP



There are a range of case studies and client testimonials available on our website, please visit [www.powerperfactor.com](http://www.powerperfactor.com) for further information.